EFFECTIVENESS OF PRANAYAMA ON STRESS AMONG MOTHERS OF MENTALLY RETARDED CHILDREN AT SELECTED SPECIAL SCHOOL IN MADURAI.

M.Sc (NURSING) DEGREE EXAMINATION

BRANCH - V MENTAL HEALTH NURSING

COLLEGE OF NURSING

MADURAI MEDICAL COLLEGE,

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A dissertation submitted to

THE TAMILNADU DR.M.G.R. MEDICAL UNIVERSITY,

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In partial fulfillment of the requirement for the degree of

MASTER OF SCIENCE IN NURSING

APRIL 2015

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CERTIFICATE

This is to certify that this dissertation titled**, "EFFECTIVENESS OF PRANAYAMA ON STRESS AMONG MOTHERS OF MENTALLY RETARDED CHILDREN AT SELECTED SPECIAL SCHOOL IN MADURAI"** is a bonafide work done by **Mrs. M. SAISHREE,** M.Sc (N) Student, College of Nursing, Madurai Medical College, Madurai-20, submitted to THE TAMILNADU DR.M.G.R. MEDICAL UNIVERSITY, CHENNAI, in partial fulfillment of the university rules and regulations towards the award of the degree of **MASTER OF SCIENCE IN NURSING, Branch-V, Mental Health Nursing,** under our guidance and supervision during the academic period from 2013—2015.

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ABSTRACT

Title: Effectiveness of pranayama on stress among mothers of mentally retarded children at selected special school in Madurai. **Objectives:** To evaluate the level of stress among mothers of mentally retarded children at selected school in Madurai. To evaluate the effectiveness of Pranayama on stress among mothers of mentally retarded children at special school in Madurai. To associate the level of stress among mothers of mentally retarded children with their selected socio demographic variables. **Hypotheses:** There is a significant difference between the pre test and post test level of stress among the mothers of mentally retarded children at selected special school in Madurai, there is a significant association between the level of stress among the mothers of mentally retarded children with their selected socio demographic variables. Modified Ludwig Von Bertalanffy General system theory in (1968) was adopted for this study. **Methodology:** A pre experimental one group pre test, post test design was used. 40 mothers of mentally retarded children were selected purposively. The study was conducted at Anbagam mentally retarded special school at Madurai. Pre test was conducted on the first day by using perceived stress scale after obtaining consent from all the subjects then pranayama was given about 20 minutes, once a day in the morning for 30 consecutive days for the subjects having stress as measured by the scores on perceived stress scale. Post test was assessed on 32ndday by using the same tool. **Findings**: pranayama reduced the stress level among the mothers of mentally retarded children. There was a significant association between post test level of stress and age, educational status, type of family. **Conclusion:** pranayama is cost effective, non-invasive, non-pharmacological complementary and alternative therapy to reduce the level of stress among mothers of mentally retarded children.

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INTRODUCTION

"There is no end. There is no beginning. There is only the infinite passion of life."

- Federico Fellini

Wisdom is the product of brain. Man has relied wisdom and development of language to achieve his current state of dominance in the world. Intelligence is clearly a salient feature in permitting the species to adapt to a wide range of differing environments. The people of restricted intelligence are at a disadvantage in solving problems and coping with new complex situations.

Mental retardation is not a disease or single entity. It refers to a developmental mental disability and that appears in children by birth or under the age of 18years. In most of the cases, it persists throughout adulthood. It can be defined as a level of intellectual functioning is well below average and results in significant limitations in the person's daily living skills. It exists when there is significantly sub average general intellectual functioning with concurrent deficits in adaptive behavior. Failure to achieve developmental milestones is suggestive of mental retardation. These limitations will cause a child to learn and develop more slowly than a typical child. They are likely to have trouble in the school. They will learn, but it will take them longer. The causes for mental retardation are many may be biological or environmental factors or interaction between two. It includes heredity about 30%, prenatal illness and issues, childhood illness and injuries, and environmental factors. In about 40% of cases, the cause of mental retardation cannot be found.

The severities of mental retardation have been identified under four levels based on their I.Q level, mild (educable)50-70, moderate (trainable) 35-49, severe (dependent retarded) 20-34 profound (life support) below 20.

As the behavior and abilities associated with each of these levels are different therefore care also should give accordingly; that is mild cases needs mere guidance rather than physical care but profound cases depends on another person for their routine care. National Day for the mentally retarded on December 8th.

Mental retardation can be preventing by immunization against disease such as measles and Hib vaccine prevents many of the illnesses that can cause mental retardation. Pregnant women should be educated about the risks of alcohol consumption and need to maintain good nutrition during pregnancy. Children should undergo routine developmental screening as part of their pediatric care. Parenting a child with a disability is above and beyond that of caring of a normal typical child but good parental care also will prevent retardation. Mothers are the first teachers and children spend maximum time at home, so mothers needs to be involved in training of mentally retarded child in learning self care comprising of brushing, bathing, feeding, toileting, dressing and grooming.

Since mental retardation is common developmental problem among children. Further, the investigator during her practice in the school observed that most of the parents have misconceptions and have lack of knowledge about the care of mental retarded children and also number of study reported that there is a lack of knowledge among the mothers regarding care of mental retarded children. It is very much important for nurses to assess and focus on each mother regarding how they have to care their mental retarded children. As a nurse and researcher I have a vital role in

recognizing problems of mental retardation care and giving health education to mothers to improve the quality of life.

Children are God's gift blessings to parents. The birth of a baby in a family is a happy event because he/she brings joy, happiness and expectation in the family. It is a major blow when they are first told that their child is mentally retarded.

There is a massive wound to the ego when the disability of the baby shatters their hope. It is a family crisis which affects not only the parents but also the siblings and other significant members of the family. The effects of the mental retardation on the family are evident in several areas such as increased cost, limited time, and psychological stress. Shock and denial are the two initial reactions of parents to such type of situations. The frustration arising out of the situation, need various adjustments that must be used for bringing up the child. The feeling of inefficiency in coping with the situation can have enormous impact on the parents which results in increased parental stress. Pranayama meditation is a simple technique of purification of the mind which enables each individual to confront the problem and suffering without stress or conflict. It is an ancient method of meditation developed 2,500 years ago by Buddha. It takes very little time to learn and practice throughout life.

A differently disabled child in a family is usually a serious stress factor for the parents. It often requires a reorientation and reevaluation of family goals, responsibilities and relationships. In India, the majority of persons with mental retardation have traditionally been cared for by their families. In today's modern society this home-based care has resulted in many adverse consequences. Factors such as changes in the social system (e.g. breaking up of joint families) and the economic

system (e.g. unemployment, inflation, etc.) have contributed to the stress that parents of mentally retarded children experience.

The emotional and social stress that these parents undergo have been described by various investigators in the East and West. On the other hand, few studies have shown that stress is not an inevitable consequence in these parents. However, studies comparing the stress perceived by parents of differently disabled and normal children are limited. Therefore, I undertook this study (i) to find out the stress of the mothers of mentally retarded children, (ii) to establish whether these stresses occur more frequently in mothers of mentally retarded children.

The twentieth century has witnessed an evolutionary explosion. Progress in technology and medicine has been very rapid making life easier and more comfortable. Surgery has advanced to such an extent that replacement of essential organs is possible now. All these advances suggest that man should be very happy today. Is it true? The present chaotic conditions of living are playing havoc on his mind. Instead of feeling and looking happy many people today look defeated, tired, morose or anxious, needing pills to go to sleep, pills to move their bowels and pills to keep them calm. All these artificial methods provide no solution to the existing problems, they only give temporary relief. Pranayama is a great boon to civilized man.

World Health Organization (WHO) of the United Nations Organization (UNO), in International Classification of diseases and related problems (ICD -10), published the definition of Mental Retardation in 1992 which states: “differently disabled is a condition of arrested or incomplete development of the mind which is especially characterized by impairment of skills manifested during the developmental

period which contributes to the overall intelligence, i.e., cognitive, language, motor and social abilities".

New category introduced at Census 2011. Mental Retardation was covered under the category of mental disability at Census 2011. The global incidences of mental retardation have been estimated to be approximately 1, 25,000 birth/year. The standard incidence of mental retardation in the West is 1-4% in 500 live births in west countries including India incidence is 1-5% in 500 live births. In the United States, 1 in 500 preschool age children have mild mental retardation and 1, 60,000 American children suffer with severe mental retardation.

Mental retardation is a challenge not only to any nation, but also to the entire human race. All over the world 83 million people are mentally retarded. Prevalence of mental retardation is believed to be between 1% and 3%, with mild retardation being most prevalent.Prevention is better than cure.

The recent National Sample Survey Organization (NSSO) report suggests that the number of disabled persons in the country is estimated to be 20.6 million which forms to about 1.8% of the total population and the mentally retarded population accounts to 4.6 million individuals. Census 2011 has revealed that over 21 million people in India as suffering from one or the other kind of disability. This is equivalent to 2.1% of the population. Among the total disabled in the country, 12.6 million are males and 9.3 million are females. Although the number of disabled is more in rural 80% and less in urban 20% areas. Such proportion has been reported between 57-58% for males and 42-43% females.

Across the country, the highest number of disabled has been reported from the state of Uttar Pradesh (3.6 million). Significant numbers of disabled have also been

reported from the state like Bihar (1.9 million), West Bengal (1.8million), Tamil Nadu and Maharashtra (1.6 million each). Tamil Nadu is the only state, which has a higher number (28072) of mentally retarded male children than female mentally retarded children (21222). Among the states, Arunachal Pradesh has the highest proportion of disabled males (66.6%) and lowest proportion of female disabled.

In Madurai according to "Serva SixshaAbian" (SSA) – 2013 to 2014 census, among 2334, in the case of male mentally retarded children 1295, in the case of female mentally retarded children 1039. There are 250 mentally retarded children are studying in Anbagam special school, Madurai district, among this 250 mentally retarded children, (55) students are early intervention mentally retarded children, (75) students are school going children, and (120) mentally retarded children undergone for vocational training.

At present, In India, 3000 mentally retarded children special schools, In Tamil Nadu, 1000 mentally retarded special schools and in Madurai district, 15 mentally retarded special schools are educating and providing vocational training for the special children.

1.1 NEED FOR THE STUDY:

"The capacity to care is the thing that gives life its deepest meaning and significance" - Pablo Casals

Having a disabled child grow into an adult in the family is one of the most stressful experiences a family can endure. Parental reactions to their child's exception usually include shock, depression, guilt, anger, sadness and anxiety. Some parents perceive the children with special needs as an extension of themselves and may feel

ashamed, socially rejected, and socially embarrassed. Parental reactions may be affected by economic situation, personality traits, and mental stability.

A number of practical problems may make living with a child with a special need, especially demanding. There may be financial strain to provide necessary medical expenses, special equipment, possible special schools, and caretakers in the absence of parents. The family may find it difficult to entertain friends at home or to visit others.

A study was conducted on effects of pranayama on stress among caregivers of children with special needs at, VidyasudhaSru, Porur, and Chennai. The sample size was 40 and the design used was one group pre-test-post-test. The results showed that in pre-test, 90% respondents had moderate level of stress and 10% had mild level of stress, after the intervention of pranayama, 82.5% had moderate level of stress and 17.5% had mild level of stress. The study concluded that pranayama meditation has an important role in reducing stress.

Several studies have proved that in our community we have a good number of mentally retarded children. Most of the caregivers are under severe stress in various dimensions like daily care stress, social stress, financial stress etc, certain study findings have revealed that the stress of caregivers bring lots of problems to themselves, to their family, in the care of retarded children, and also to the community and society . So the investigator felt that a study to reduce stress among caregiver is very important. So the investigator selected this problem for research study which is intended to find the effectiveness of Pranayama on perceived level of stress among caregivers.

In every country mothers and children constitute a major segment of the total population therefore service to children since womb is very much important and tremendously significant in health care delivery system. Every parent wants their child to be well behaved and encouraging focus and self-discipline is an important issue both at home and at school. But when a child has mental retardation, they will neglect and abuse their children in comparison with their non disabled children. Parents are stressed and worried due to care of their defective child.

A cross sectional and descriptive study was conducted to find out the refractive error among the students in the Nepal at school for mentally retarded children. Estimated the prevalence of mental retardation in Nepal is 4.1%. A total of 140 clinically diagnosed cases of mentally retarded students from three different schools of Kathmandu Valley were examined. Examination revealed that more than half of the examined had one or more ocular disorders with refractive error being the most common type of ocular morbidity followed by ocular disorders. Refractive error were found in 34.4%.Vision being the best sense for their education and daily activities.

It is said in developing countries Down syndrome is very common cause for mental retardation in children and it is estimated that in India there may be more than one million children are suffering with mental retardation. Consanguine marriage is the major cause for mental retardation in southern States like Andhra Pradesh, Karnataka, Tamil Nadu and Kerala. People believe that, marriage should do within the relation then children will be healthy and property also will not go out of the family. Therefore pre marriage counseling is very much important.

A study was conducted on 934 mental retarded children in selected cities of Perth in Australia to assess the prevalence of mental retardation and found that 79% of children suffering with mild mental retardation, 12% of children having with moderate type of mental retardation and about 9% of children suffering with severe type of mental retardation.

As many as 3 out of every 100 people in the country have mental retardation nearly 6,13,000 children aged 6-21 year have some level of mental retardation and need special education in school in fact 1 out of every 10 children who need special education has some form of mental retardation. About 87% of people with mental retardation will only be a little slower than average in learning new information and skills. The remaining 13% of people with mental retardation scores below 50 on I.Q. test. These people will have more difficulty in school, at home and in community.

A study conducted on assessment of parental needs regarding care of their mentally handicapped child at NIMH in Secunderabad. Research indicated that 76.6% of parents have expressed the need for seeking information regarding therapeutic, educational, and vocational programs. Parents were interested to know more about training in communication, management of behavioral problems and training in Self-help area.

With the evident of de-institutionalizing and mainstreaming, the role of parents in the care and management of their MR children has gained prime importance. In recent years all over the world, there has been a movement away from institutional care and is towards home-based care of individuals with mental retardation. The National policy on mental handicap (1999) has emphasized the importance of home -based care with parents as in the care process.

A research project conducted on 'home - based care programs for parents of children with intellectual disabilities' at school of occupation and leisure sciences, University of Sydney. The sample for the study was randomly chosen parents (n=45) of mentally retarded children of under four years age. Results indicated that parental education in home - based care is effective in making the parents to be efficient in training their mentally retarded child to be independent in their self-help skills.

A study conducted on needs expressed by mothers and fathers of young children with handicaps in UK. On 100 parents of developmental disabled children. Study revealed that 80% parents were demands for training in communication, management of behavior problems and training in home-based care of the MR children. About 1.8 percent of mothers know proper care of mental retarded children; approximately 12 million are having deficient knowledge about care of mental retardation. It evidence that cumulative exposure to highly responsive parenting styles throughout the early childhood period may provide variety of important child benefits in terms of language, cognitive, social, emotional development. Maternal responsibility as a dynamic construct of central importance to the development of children with intellectual disabilities just as it is for typically developing children.

Since mental retardation is a developmental problem among children. It is evident that mental retardation can be preventable and manageable. This calls for a more concentrated effort on the part of medical profession and those engaged in child care activities. As a nurse and researcher I have significant role in recognizing problems of mental retardation care and giving health education for mothers to improve knowledge and practice of mothers regarding care of preschool mental retarded children.

Prevalence and incidence of mental retardation

The global incidences of mental retardation have been estimated to be approximately 1, 25,000birth/year. The standard incidence of mental retardation in the West is 1-4% in 500 live births in west countries including India incidence is 1-5% in 500 live births. In the United States, 1 in 500 preschool age children have mild mental retardation and 1, 60,000 American children suffer with severe mental retardation.

Intellectual functioning is measured by a test called I.Q test. The average score is 100. People scoring below 70-75 are thought to have mental retardation. Prevalence an estimate for mental retardation is up to 60%-70% but incidence is higher in children and adolescents when compared with adults. 165 of population has I.Q. less than85 and 2% of population have I.Q. less than 70.

A survey was conducted to estimate the prevalence of mental retardation; report says prevalence is high in pre-school children in comparison with higher age group children. Prevalence at pre-school age is 56%, at school age it is 44% and at adolescence period it is 9%. Proper education and guidance at pre-school age effects tremendously and improves the intellectual capacity of a child rather than other age groups. Approximately 80% of the mentally retarded population is in the mildly retarded category. About 10% of the mentally retarded population is considered moderately retarded, about 3-5% of the mentally retarded population is severely retarded. Only 1-2% of the mentally retarded population is classified as retarded.

According to statistics made available by the centers for Disease Control and Prevention in the 1990s, mental retardation occurs in 2.5 - 3% of the general population. About 6 to 7.5 million mentally retarded individuals live in the United States alone. Study shows 17% among children aged less than 18 years, 15.5% among

children age less than 8 years in 1999. And it is reduced to 15% and 12% in 2002 respectively. However prevalence estimates during 2000 were more consistent with the estimations from the early 1990's.

The Department Commission of the special Education in the War-France has measured the incidence rates of the children recognized as been mentally handicapped. The occurrence rate of the children with mentally handicapped in the War is 2.04%. The rate of the children with a psychic deficiency recognized by the commission is 1.25%. These rates are 2.5 times higher among boys than girls. Psychic deficiencies occur mainly between three and nine year of age, at the entry to the primary school. The geographical areas of Draguignan is significantly under - equipped with medico-social structures but is characterized by a high rate of children with a psychic handicap. Conclusion of the study is the Law of February 11, 2005 for chance and equal right, stipulates a counting of the people affected by mentally handicap and underlying pathologies, to define the etiology of the mentally handicap, to improve the accompaniment of those people and to develop actions aimed at reducing the incapacities and at the prevention of risks.

A study was done to investigate relation between intrauterine growth and mental retardation in Western Australia. The appropriateness of intra uterine growth was assessed using percentage of optimal birth weight, a measure that accounts for gestational age, maternal height, parity and infant sex. Using population-based record linkage, singleton Caucasian and Aboriginal children born in Western Australia in 1983-1992 and alive in 2002 with M.R of unknown cause were compared with children without ID. The odds of ID increased with less - than optimal intrauterine growth. In Cousin Children, after adjustment for socio demographic factors, sever

growth restriction was associated with development of mild-moderate ID among preterm births and term births and with sever ID among term births. Infants with excess intrauterine growth were more likely to be diagnosed with ID associated with autism spectrum disorder. These findings suggest that inappropriate intrauterine growth, less than or greater than optimal birth weight, is associated with development of ID.

The prevalence of mental retardation in North America is subjected of heated debate. It is thought to be 1-3 % of the population, depending on the methods of assessment and criteria of assessment that are used. Many people believe that the actual prevalence is probably closer to1%, and that 3% figure is based on misleading mortality rates, cases that are diagnosed in early infancy, and the instability of the diagnosis across the age span. If the 1% figure is accepted, however, that means that 2.5 million mentally retarded people reside in the United States. Males are more likely than females to be mentally retarded at a 1:5:1 ratio.

A comparison study conducted to assess prevalence of mental retardation. The data from the Metropolitan Atlanta Developmental Disabilities were used. The administrative prevalence of mental retardation was identified by review of records from multiple sources, with the public schools as the primary source. The overall administrative prevalence of mental retardation is 12.0 per 1000 children. The rate from mild MR was 8.4 per 1000 and the rate of sever MR was 3.6 per 1000. The prevalence was higher in Black children than White children. Children with severe mental retardation had more coexisting disabilities than did I children with mild mental retardation. The mental retardation prevalence rates reported here, especially the race-specific rates, may reflect social and demographic feature unique to the

metropolitan Atlanta area and therefore should be used with caution in making comparisons with other populations.

A specific cause is identifiable in only about 25% of people who are mentally retarded and of these only 10% have the potential for cure. In the remaining 75%, predisposing factors, such as deficient pre natal care, inadequate nutrition, poor social environment, and poor child-rearing practices, contribute significantly to mental retardation. Mental retardation have no cure but we can prevent before it develop or we can best manage with proper care.

1.2 STATEMENT OF THE PROBLEM:

"A study to assess the effectiveness of Pranayama on stress among mothers of mentally retarded children at selected special school in Madurai"

1.2 OBJECTIVES OF THE STUDY

1. To assess the level of stress among mothers of mentally retarded children at selected special school in Madurai"
2. To evaluate the effectiveness of pranayama on stress among mothers of mentally retarded children at selected special school in Madurai.
3. To associate the level of stress among mothers of mentally retarded children with their selected socio-demographic variables.

1.4 HYPOTHESES

H1: There is a significant difference between the pretest and post test level of stress among the mothers of mentally retarded children at selected special school in Madurai.

H2: There is a significant association between the level of stress among mothers of mentally retarded children with their selected socio-demographic variables.

1.5 OPERATIONAL DEFINITIONS

1. EFFECTIVENESS

In this study, it refers to determining the extent to which the Pranayama has achieved the desired effect in reducing the level of stress among mothers of mentally retarded children.

2. PRANAYAMA

In this study, it refers to an exact science, which involves the regulation of breath or control of prana, which is the inspiration inspiration and breath holding, and expiration expiration and birth holdingfinally relaxation, totally 20 minutes once a day that follows after securing that steadiness of posture or seat, Asana. Before which $1_{1/2}$ hours starvation was ensured.

3. STRESS

In this study, it refers to the response of the mothers to situations that disrupts physical, physiological, intellectual, emotional and social aspects of their life. It is a measure of the degree to which situations in one's life are appraised stressful. So their feelings and thought are measured by perceived stress scale.

4. MOTHERS OF MENTALLY RETARDED CHILDREN

In this study, it denotes mothers (aged above 20 years), who are taking care of the mentally retarded children for at least 2 hours a day.

5. SPECIAL SCHOOL

In this study, it refers to school for children who are unable to benefit from ordinary schooling, because they have physical, intellectual and emotional disabilities.

1.6 ASSUMPTION

The study assumes that,

1. Mothers having mentally retarded children may experience varying level of stress.
2. Exposure to stress affects the wellbeing of an individual though the mothers havingnormal child.
3. Pranayama may not give any adverse reaction.

1.7 DELIMITATION

The study is delimited to,

1. Mothers who accompany with the child to and from the special school.
2. The sample size was limited to 40.

1.8 PROJECTED OUTCOME

The investigator will come to know the existing knowledge among mothers of mentally retarded children. Investigator will be assessing the effectiveness of pranayama in improving the knowledge of mentally retarded children, regarding. The pranayama meditation could help the mothers of mentally retarded children to promote adequate knowledge regarding reduction of stress.

Review of Literature

CHAPTER - II

REVIEW OF LITERATURE

This chapter focuses on literature review. According to Hart (2007), literature review is the selection of available documents (both published and unpublished) on the topic, which contains information, ideas, data, and evidence written from a particular standpoint to fulfil certain aims or express certain views on the nature of the topic and how it is to be investigated, and the effective evaluation of these documents in relation to the research being proposed.

Literature review serves a number of important functions in research process. It helps the researcher to generate ideas or to focus on a research approach, methodology, meaning tools and even type of statistical analysis that might be productive in pursuing the research problem. Review of literature in the study is organized under the following headings.

The literature was searched from extensive review from various sources and depicted under the following headings:

1. Literature related to stress among mothers of mentally retarded children.
2. Literature related to pranayama on stress.
3. Literature related to pranayama reduces the stress among mothers of mentally retarded children.

2.1 LITERATURE RELATED TO STRESS AMONG MOTHERS OF MENTALLY RETARDED CHILDREN

As of 2013, the term “mental retardation” is still used by the World Health Organization in the ICD-10 codes, which have a section titled “Mental Retardation”(codes F70-79). In the next revision, the ICD-11 is expected to replace the term “mental retardation” with “intellectual disability, “and the DSM-5 has replaced it with “intellectual disability (intellectual developmental disorder). Today, new words like special or challenged are replacing the term retarded. The term developmental delay is popular among care takers and parents of individuals with intellectual disability because delay suggests that a person is slowly reaching his or her full potential rather than being disabled.

Cunningham and Daviswho described mothers of mentally retarded children reactions in terms of stages. According to these authors a state of shock is experienced at the initial disclosure, i.e. a feeling of not being able to register or understand the news and thus withdrawing. This will be followed by a reaction stage, during which emotions of denial, sadness, anger, etc., may be felt in a rush. Then gradually mothers will enter an adaptation stage when they, for example, begin to ask questions about What can be done, and finally a reorganisation stage when they seek help and begin to plan ahead towards stressful situation.

Islam MZ1, Shanaz R2, Farjana S3 (2013) This present comparative cross-sectional study tried to compare difference of mental and physical stress between the mothers of children with mental retardation and the mothers of children with no mental retardation. It included 220 parents, 110 of whom had children with mental retardation and another 110 mothers of children with no mental retardation. To assess stress, A Quick Stress Assessment Test (QSAT) (Vaz, 1995) was used, Data were

collected with a self-administered questionnaire and analyzed by using SPSS software. The study revealed that the mothers of children with mental retardation shared significantly greater stress score (34.27) than the mothers of children with no mental retardation (21.66), [t (218) = 2.63, p=0.001]. Mental stress score was significantly higher among mothers with mentally retarded children (33.57) than the mothers with no mentally retarded children (26.46) [t (218) = 3.87; p=0.002] while physical stress score was significantly higher among mothers with mentally retarded children (20.43) than the mothers with no mentally retarded children (18.66).

K. Maheswari (2012) community- based care settings may serve to increase demands on family members, it is essential to be more active participants in the care of their child. This present study was carried out to assess the burden experienced by the mothers of disabled children at special school in Trichy. Purposive sampling method was adopted to collect data from 50 respondents. Descriptive research design was used and the results indicated that less than half of the respondents (44%) have high level of stress among mothers.

ThiyamKiranSingh (2010) conducted the study onimpact of stress among mothers of mentally retarded children . The study was conducted at the outpatient department of P.G.I. Behavioural and Medical Sciences, Raipur, and two special schools of mentally challenged children and it was done by purposive sampling method. Using specially designed semi-structured socio demographic and clinical data sheet, information was gathered about mentally challenged children and their mothers. Vineland Social Maturity Scale (VSMS) and Developmental Screening Test (DST) were used to assess their intelligence. Mothers fulfilling inclusion and exclusion criteria consenting for the study were selected. National Institute for the Mentally

Handicapped Disability Impact Scale (2003) was then administered on them. This study reveals that mothers of mentally challenged children have negative impact of stress was higher than the positive impact of stress.

Gerstein et al., (2009) results showed that Trajectories of daily parenting stress were studied for both mothers and fathers of children with intellectually disabled across child ages 36–60 months, as were specific familial risk and resilience factors that affect these trajectories, including psychological well-being of each parent, marital adjustment and positive parent–child relationships Mothers' daily parenting stress significantly increased over time, while fathers' daily parenting stress remained more constant. Decreases in mothers' daily parenting stress trajectory were associated with both mother and father's well-being and perceived marital adjustment, as well as a positive father–child relationship. However, decreases in fathers' daily parenting stress trajectory were only affected by mother's well-being and both parents' perceived marital adjustment. Hill & Rose (2009) Regression analysis revealed that parental cognitive variables predicted 61% of the variance in parenting stress. Parenting satisfaction, a subscale of the measure of parenting sense of competence, mediated the relationships between adaptive behaviour and parenting stress and between family support and parenting stress.

Sibel Ergün,1Gül Ertem2 Balikesir University Health School, Balikesir (2009) To determine the difficulties of mothers living with children suffering from intellectual disabilities, and the influence of socio-demographic factors aggravating the situation. The study was conducted from September to December 2009 in Odemis, Izmir in western Turkey, in one public-sector and two private-sector rehabilitation centres for disabled children. The research sample consisted of mothers with primary

responsibility for 168 disabled children between the ages of 3 and 18 years. Data was collected using a pre-designed Personal Information Form, which had two sections. The first part contained 20 items about the socio-demographic data of the families and the children, their knowledge about mental disabilities and support for childcare. The second part consisted of 18 items which related to the most frequently encountered problems in terms of daily care, as well as the financial, psychological and social aspects. Data, collected through face-to-face interviews spanning 30-40 minutes, was analysed using analysis of variance and student's 't' test. Of the 168 mothers, 64 (38.1%) said they experienced sadness; 72 (42.9%) anger; and 32 (19.1%) felt lonely. As many as 92 (54.8%) mothers were blamed by their in-laws for the disability in their respective children. Only 50 (29.8%) parents in the study said they had "sometimes" felt acceptance of their disabled child. The psychological situation of parents with disabled children is an issue of particular concern, and psychological consultancy and guidance should be provided to such families to enable them to overcome their negative emotions and the consequent problems.

According to WHO (2008) the prevalence of stress varies throughout the world. The lowest rates are reported in Asian and Southeast Asian countries. Percentages represent the lifetime chance that a person will experience a stress that lasts a year or more. For example, Taiwan reports less than 2%, and Korea 3%. Western countries typically report higher rates, such as Canada 7%, New Zealand 11%, and France 16%. The United States has a rate of 6%. Also, countries plagued by protracted civil war, such as Bosnia and Northern Ireland, report higher rates of stress. A study was conducted on effects of pranayama on physical and mental health of young fellowship course trainees at Defence Institute of Physiology and Allied sciences, Delhi. Fifty-four trainees were randomly divided into yoga group and

control group. pranayama were performed by both the groups from 6 to 10 month of training. The study revealed significant improvement in the reduction of stress yogic, pranayama group than control group.

Journal of Indian Academy of applied psychology, April (2008) A study was conducted in Karnataka University, Dharwad, Karnataka state, India, Fathers and Mothers of 628 mentally retarded children was included and perceived stress scale using family interview for assessing the stress level. From this study ANOVA regression analysis and correlation mean fathers (50.00) SD 8.183,'t' value 9.48 and mothers mean 54.98, SD 10.34 and 't' value 10.45. The study revealed that mothers report higher levels of stress compared to fathers.

Most, et al., (2006) explored that whether mothers of children with Down syndrome demonstrated distinct patterns of stress during their children's early development, compared with mothers of children with other developmental disabilities. The stress trajectories of 25 mothers of young children with Down syndrome and 49 mixed aetiology mothers comparison group were estimated, using growth modelling on data collected at ages of 15, 30 and 45 months. On average, stress in the mixed comparison group was higher at Time 1 and remained unchanged over time, while stress in the Down syndrome group was lower at Time 1 but increased steadily. After taking diagnostic group membership into account, more advanced cognitive-linguistic functioning and lower levels of maladaptive behaviours at all time points were associated with lower levels of maternal stress. The cognitive-linguistic and behavioural trajectory observed in early development in Down syndrome may contribute to the changes in maternal stress levels observed throughout these early years.

Shin et al., (2006) found that mothers experienced more stress than fathers. Path analyses were conducted for 50 mothers and 50 fathers separately. Mothers with female children, those with children of lower intellectual functioning, and those whose husbands had health conditions experienced more stress than the other mothers. Fathers with lower economic status and a smaller social support network were more stressed than the other fathers. Both mothers and fathers were more stressed when they experienced stronger stigma, although the effects were not significant when other variables were considered together in path analyses. Mothers were more affected by the child's characteristics and the spouse's functioning; they anticipated future problems related to the child's functioning more than fathers did.

Indian journal of psychiatry, MitaMajumdar, John Fernandes, (2005) This study was conducted in the Child Guidance Clinic of a tertiary care psychiatry hospital, Goa. The study sample, comprising 180 subjects, was categorized as: group A (30 mothers and 30 fathers of profound to moderately mentally retarded children, mean IQ 38.63), group B (30 mothers and 30 fathers of mild to borderline mentally retarded children, mean IQ 63.2) and group C (30 mothers and 30 fathers of children with normal intelligence, mean IQ 107.7), which served as the control group. Each group was evaluated using the Family Interview for Stress and Coping (FISC) in Mental Retardation, and the perceived stress scale was used as a tool to evaluate the stress level. Mothers in group A had a significantly higher frequency of stressors and level compared to those in groups B and C. The correlation was found to be significant in group A ($p<0/05$ and $p<0.01$), group B ($p<0.01$ and $p<0.05$) and in group c only for the fathers ($p<0.01$). The findings of the study that fathers in A, B and C differed significantly in experiencing stress is in accordance with that of mothers stress.

Mary (2005) found that almost all mothers reported strong feelings for their child immediately after receiving the news of the disabling condition. The most commonly expressed negative emotion was a feeling of grief or sorrow, which had lessened over time. There were also reports of the negative feeling of shock and guilt which' had also lessened over time. The mothers that reported considering suicide were mothers of children with severe retardation. The study also revealed that Hispanic mothers reported an attitude of self-sacrifice towards the child and greater spousal denial of the disability more often than did the other mothers. Both Hispanic and White mothers often reported stages of reaction from strong negative feelings to later periods of adjustment. Overall the study revealed a common and universal reaction of love and sorrow across cultures and level of retardation.

Baker et al.2002; Beckman, 2001: Dyson, (1991) mothers of children with intellectual disabilities experience more parenting stress and mental health problems, such as depression, stress than do mothers of children without disabilities. Most mothers of the mentally retarded carry this sorrow with then for the rest of their lives, whether or not the child remains at home with them. Other feelings commonly attributed to the mothers of the mental retardation include embarrassment, anxiety and denial of the handicapped, anger towards paediatrician, and other professionals or to the child. Mothers of children with mental retardation have generally been viewed as being at risk for a variety of family life problems and emotional difficulties. Paramount among their family life problems are unusual giving demands and restrictive time demands. For many family members especially mother, management of daily need of retarded child constitutes several problems. (**e.g.. Lazarus &Folkman, 1984: McC'ubbrn & Pattcrson. 1983).** A retarded child isconsidered as a chronic stress to the family.

A study by Marika, V. (1999) reveals the negative emotional states in the mothers of disabled and non-disabled children. Mothers of disabled children felt significantly more under pressure, were sorry for their child, worried about the child's future. They were also more tired, desperate, and sorry for the children and themselves, and more displeased, sad, depressed, helpless, and embittered. The mothers of disabled children had the highest scores in negative emotional states. Mothers were also worried about the child's future, were more sad, tired, helpless, depressed, and nervous than fathers and had higher total score in negative feelings.

2.2 LITERATURE RELATED TO PRANAYAMA ON STRESS

Pranayama is the fourth limb of the Raja Yoga mentioned in the Yoga sutras of Patanjali. Prana means life force or vital energy or simply the breath; yama means control. Thus, Pranayama means control of the life force. Paramahamsa Yogananda said, "Yoga works primarily with the energy in the body through the science of pranayama". Since breath is the fundamental to life, pranayama or the breathing technique is the yogic art of breathing and it is basic to any yoga exercise. You'll find that just doing pranayama can help you relax and reduce stress.

Pranayama controls and regulates breathing and is very beneficial for the disabled. This technique particularly improves the stamina, balance and strength, along with inducing better sleep by the improved circulation of the Vital Energy. Good breathing can also help release deeply held physical and emotional tension within the body. Pranayama helps in controlling fits which may be common among these children.

Posted by Nestor on Apr 02, (2014) in Qigong, Tao Meditation Pranayama is the art of breathing, Indian Yogi style. It has long been an important component of

the yogi's practice, accompanying yoga asana or postures and as a gateway to meditation. "As a jug is filled from the bottom to the top, so fill the lungs from their base to the brim. Fill them to the top of the collar bone and inner armpits"**.** Pranayama for stress relief is a highly complex and evolved art that yogis master only after long training where considerable lifestyle, devotional, nutritional and philosophical constraints must be in place for there to be success. Many yoga masters warn of the side effects of pranayama practice if it is undertaken without the right preparation and supporting circumstances. Like so many 'spiritual' practices, pranayama has much to offer as a means to reduce stress at a profound level. Tao pranayama has an added advantage - it is not a technique that needs to be practiced exclusively sitting in meditation.

Ed Harrold march 13 (2014) Pranayama in simple terms can be defined as series of breathing exercises that have great impact on our health. It is an ancient method of yoga practised since centuries by yogis. Importance of pranayama is reflected in modern days and has gained popularity even in western countries. If the technique is understood, it can be practised irrespective of time and place. Let us look at some of the benefits of practising pranayama and specific types of pranayama that help in reducing stress.

LathaRajendra Kumar, Department of Physiology, Yenepoya Medical College, Deralakatte, Mangalore, India (2013) Despite improved clinical care, heightened public awareness and wide spread use of health innovations, alcoholism remains a leading cause of death in many parts of the world. Chronic alcoholics suffer from stress and multitude of symptoms. The progressive addiction to alcohol will gradually nullify all other interests in the patient's life so that a deterioration of the

physical, psychological, social, cultural and religious values takes place. The role of pranayama in healing asthma, arthritis and other disorders has been known. Breathing exercise Pranayama was taught to chronic alcoholics. Stress levels were measured before and after pranayama in controls and chronic alcoholics. Results: Reduced stress levels were noted using the perceived stress scale in both controls and chronic alcoholics after pranayama breathing exercise. There is a promising effect of pranayama in organising effective rehabilitation and treatment programmes to reduce stress in chronic alcoholics.

Shaju, shomia, j.umarani July (2013) To assess the effectiveness of pranayama on stress among adolescents of selected pre university college at Mangalore. The setting was Vishwa Mangala Pre university College at Mangalore. A sample of 70 were included in the study (control group, n=35, experimental group, n=35). Quasi experimental pre- test post-test design Methods: SQ stress scale was used to compare the post test stress level of experimental and control group. There was a statistically significant difference in the post test stress score of experimental group. As the calculated 't' value (t=17.016) was greater than the table value (t68=1.668) at 0.05 level of significance, there was a significant reduction in the level of stress in the experimental group after the practice of pranayama. But there was no significant reduction in the level of stress in the control group. Findings from this research support the current literature base suggesting that practice of pranayama is a relaxation technique to reduce stress.

Telles S, Hanumanthaiah B, Nagarathna R, Nagendra HR. (2008) A comparative study conducted in Vivekananda Kendra Yoga Research Foundation, Bangalore, India, Two groups of 45 mothers of mentally retarded children each,

whose ages ranged from 19 to 33 years, were assessed on a steadiness test, at the beginning and again at the end of a 10-day period during which one group received training in pranayama, while the other group did not. During the 10-day period, one group (the 'pranayama' group) received training of pranayama, the other group (control) carried out their usual routine. After 10 days, the 'pranayama' group showed a significant (Wilcoxon's paired signed-ranks test) decrease in errors, whereas the 'control' group showed no changes.

Mikkyo Gardens (2007) published that blood cortisol, known as the stress hormone, was measured in 121 individuals, between 28-50 years of age. Regular pranayama practitioners (Group 1) were compared with beginning practitioners (Group 2) during their pranayama sessions. The beginning practitioners were also measured before learning pranayama, while listening to classical music (Group 3). Among beginners, the fall in cortisol levels was significantly greater during pranayama than when listening to classical music, suggesting that pranayama produces a better relaxation response.

Uma K, Nagendra HR, Nagarathna R, Vaidehi S, Seethalakshmi R. (2006) A study conducted at Vivekanandra Kendra Yoga Research Foundation, Bangalore, India: 90 mothers with mental retardation children of mild, moderate and severe degree were selected from four special schools in Bangalore, India. Forty-five mothers of mentally retarded children underwent yogic training for one academic year (5 hours in every week) with an integrated set of pranayama. They were compared before and after pranayama training with a control group of 45mothers of mentally retarded children matched for chronological age, sex, IQ, socio-economic status and socio environmental background who were not exposed to pranayama training but

continued their usual school routine during that period. There was highly significant improvement in the yoga group as compared to the control group. This study shows the efficacy of pranayama as an effective therapeutic tool in the management of stress among mothers of mentally retarded children.

Pincus DB, Friedman AGDepartment of Psychology, Boston University, Boston, Massachusetts, USA,(2005)A cross-sectional prospective study was conducted to explore the relationship between cognitive coping strategies and parental stress in mothers of children with Down syndrome. A total of 621 participants filled out questionnaires, Nijmegen OuderLijke Stress Index-KorteVersie was used to measure parental stress. After 8 months, stress was measured again cross sectionally. Prospectively, acceptance and catastrophizing were related to more stress, whereas positive reappraisal that we use in pranayama was related to less stress.

Benavides S, Caballero J.The University of Texas, Pan American, Edinburg, TX 78541, USA (2003) A randomized comparative trial was conducted to assess the effect of pranayama on stress among 131 subjects from the community in south Australia. Design was quantitative and purposive sampling technique was used. Experiment group received one hour session of pranayama for ten weeks. Stress level was assessed with perceived stress scale. Experimental group had significantly higher stress level ('t' (102), $p = 0.021$) than the control group ('t'(83), $p = 0.012$). The study revealed that pranayama were found to be effective in reducing stress and improving health status.

2.3 LITERATURE RELATED TO PRANAYAMA ON STRESS AMONG MOTHERS OF MENTALLY RETARDED CHILDREN

Long term exposure to stress can lead to serious health problems. Stress cannot be completely eliminated but it can be controlled with relaxation techniques such as (yogic breathing) pranayama. The practice of pranayama on mothers of mentally retarded children helps to gain a steady mind and positive changes in personality. It is also beneficial to treat stress related symptoms.

Ms. Naila Rashid, (2012)conducted the proposed paper examines the effectiveness of pranayama on stress among mothers of mentally challenged children in Hyderabad. Mental retardation is a serious problem affecting a large number of people. Amongst them the mothers are worse off than average. The proposed paper focuses on the excluded mothers of mentally retarded, how they are unable to send their children to special schools due to lack of awareness and money. So it can be concluded that doing pranayama, reduces the stress on mothers who are having mentally retarded children. Then these mothers would be able to overcome this stressful situation.

Yildirim Sari H, Başbakkal Z. (2010) Conducted a study to assess the level of stress among mothers of mentally retarded children and adults with an intellectual disability in Turkey. The aim of this study was to determine pranayama that play a role in stress among mothers of mentally retarded children with an intellectual disability. The research was conducted in 24 special education and rehabilitation centers in Izmir (in Turkey) provincial centre in which intellectually disabled individuals are taught. A total of 355 mothers were reached in the research. Data were collected using face-to-face interviews. The mothers included in the study had mean

stress scores of 16.7 ± 10.06 (minimum: 0, maximum: 49). There was a significant relation between stress scores of the mothers.

Meith (2009) A randomised comparative trial was conducted to assess the effect of pranayama on stress among 131 mothers of mentally retarded children from the community in South Australia. Experiment group received one hour session of pranayama for ten weeks. Stress level was assessed with perceived stress scale. The study revealed that pranayama were found to be effective in reducing stress level mothers of mentally retarded children, and improving health status.

Bonura.K.B.,et.al. (2009) conducted study on the effects of yoga (pranayama) on stress in mothers of mentally retarded children and concluded that the yoga group showed the most stress reduction over time. Time by group interactions for the other variables (stress severity, depression, and anxiety) were non significant, although Yoga participants experienced the most benefits over the course of the intervention. Replication with a larger sample size is warranted in order to better understand the impact of Yoga on psychological health in mothers of mentally retarded children.

Upadhyaya, G.R. and Havalappanavar, N.B.(2008) conducted a study to pranayama Support for mothers of Mentally Retarded Childrenin Karnataka Institute of Mental Health, Dharwad, Karnatak University. This study evaluates the role of pranayama in reducing the stress among mothers of mentally retarded children. The 51 pairs of mothers of mentally retarded children having the pranayama training and compared with a matched group of 51 pairs of mothers of mentally retarded children having no pranayama support, regarding the level of stress caused by the mentally retarded child. Family interview for stress and coping in mental retardation (FISC-

MR) developed by Girimaji, Shobha Srinath, Shekhar Sheshadri is used for assessment of stress. These two groups differ significantly regarding the total stress, indicating reduction in stress due to pranayama support. The effect of pranayama support is more evident in the areas of care stress and emotional stress, while influence of pranayama support is not found to be significant in the areas of social and financial stress.

Chen TL, Mao HC, Lai CH, Li CY, Kuo CH. Department of Nursing, Chung Jen College of Nursing, Health Science and Management, Chiayi City, Taiwan, (2005): The study employed a quasi-experimental research design in which 31 voluntary mothers of MR children (exercise group 16; control group15) aged 19 to 32 years were purposively sampled from one public special school in Taipei County. The pranayama exercise program was practiced by the exercise group three times per week for a consecutive 7 week period. Stress scores were assessed at pre-exercise (baseline) and at the seventh and ninth week after intervention completion. A total of 30 subjects (exercise group 16; control group 14) completed follow-up. Results included: 1. Compared with mothers of MR children in the general population, the study subjects (n = 30) all fell below the 50th percentile. There was no significant difference stress in scores between the two groups at baseline (i.e., pre-exercise). 2. Research found a positive association between pranayama habit after school and endurance among mothers of MR children. 3. Compared to the control group, the exercise group showed favorable outcomes in terms of low stress level. The GEE analysis showed that pranayama exercise indeed improved BMI, flexibility, and reduces stress level. After 2 weeks of self-practice at home, pranayama exercise continued to improve BMI, flexibility, muscular strength, and cardiopulmonary fitness and this leads to reduce stress level.

Battacharya.A., (2002) described modern life style which is known to produce various physical and psychological stresses among mothers of mentally retarded children and subject the indirect to produce oxidatma stresses as well. The aim of the study has been to assess the effect of yogic breathing exercises (paranayama) on the oxidative stress. Yogic breathing exercises not only help is relaxing the stress of life but also improve the antioxidant status of the individual. An improvement in the antioxidant status in helpful in preventing many pathological process that are known with impaired entroxident system of body.

Subbakrishna (1999) a study undertook to assess the effectiveness of pranayama on stress among mothers of MR children attending child guidance clinic in New Delhi. Mothers (n=30) of MR children were chosen by purposive sampling technique. The tools used were structured interview schedule and perceived stress scale to gather information followed by the pranayama. The findings showed that pranayama was effective in increasing the knowledge, managing their children and reduces stress level.

Summary: The literature reviewed above has provided a better understanding and also broadened the investigators outlooks, which is a pre requisite for the research study. It has also helped the researcher to establish need for the study, the conceptual frame work and research design, preparation of instructional demonstration, for the development of the tool and to divide upon for statistical data analysis.

2.4 CONCEPTUAL FRAME WORK

Conceptual frame work is a theoretical approach to the study of problems that are scientifically based and emphasis in the selection, arrangement and classification of its concepts.

The conceptual frame work of the present study is based on the general systems theory with input, process, output and feedback. This was first introduced by **Ludwig Von Bertalanffy General system theory in (1968).**

According to this theory, a system is group of elements that interact with one another in order to achieve the goal. An individual is a system because he or she receives input from the environment. The input when processed provides an output. All living systems are open. There is a continuous exchange of matter, energy and information. The system is cyclical in nature and continues to be as long as the four parts – input, process, output and feedback – keep interacting with each other. If there are any changes in any of the parts, there will be alterations in all the parts. Feedback within the system or from the environment provides information which helps the system to determine its effectiveness.

The general system theory explained the meta paradiagram as follows

Person

Person is a social, rational, purposeful action and time oriental being, who requires fundamental health needs such as timely and useful health information, care that prevent illness and help when the self care demands cannot be met.

Environment

Environment described as the open system allows the exchange of matter, energy and the information.

Health

Health is described as the dynamic state in the life, using personal resources to achieve daily living.

Nursing

Nursing promotes, maintain and restores health and cares sick, uses a goal oriented approach in which the client and nurse interact to attain goal, so that they can function their own role independently.

Concepts based on Ludwig Bertalanffy General system theory (1968) in this study were;

INPUT

Consists of information material or energy that enters the system. The input includes the assessment among mothers mentally retarded children of age, sex, religion, educational status, marital status, occupation, monthly income of the family, family system and availability of support system and pre assessment of stress level by using perceived stress scale for stress.

PROCESS

After the input is absorbedby the system it is processed in a way useful to the system. In this study it refers to demonstration of pranayama for 20 minutes, once a day, in the morning for 30 consecutive days, post-test evaluation was conducted on the 32nd day of the study.

OUTPUT

It refers to the energy matter or information disposed by the system as a result of the process. In the present study it refers to the reduction in the stress level. This is

achieved through the comparison of levels of stress before and after pranayama and post test scores as evaluated by perceived stress scale, and stress may change or may not change.

FEEDBACK

It is the process that enables a system to regulate itself and provides information about the system's output and the feedback as input.

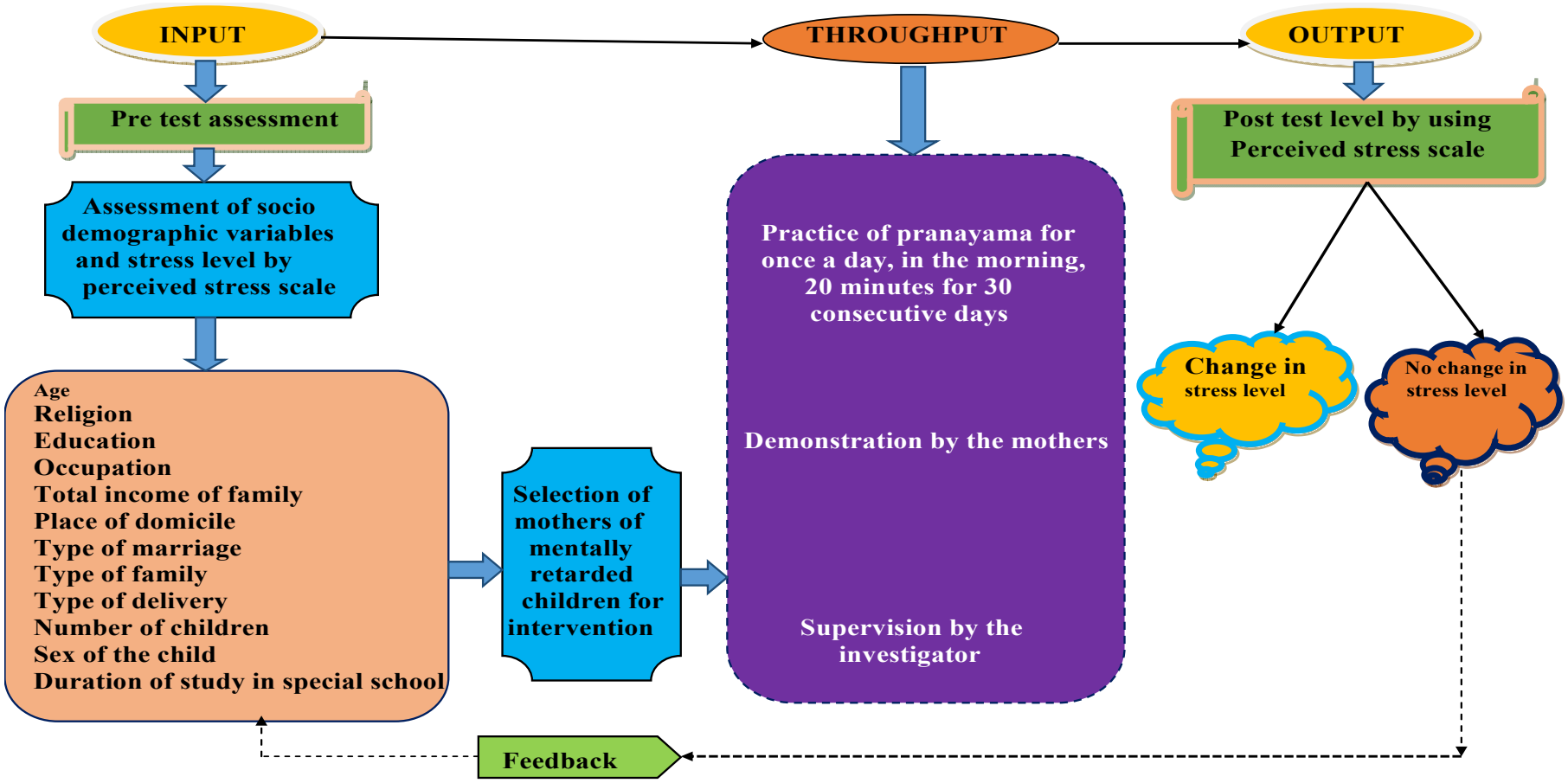

FIGURE – 1 CONCEPTUAL FRAMEWORK BASED ON MODIFIED LUDWIG VON BERTANLANFFY GENERAL SYSTEM THEORY (1968)

Methodology

CHAPTER - III

RESEARCH METHODOLOGY

The methodology of research indicates the general pattern of organizing the procedure for assembling valid and reliable data for investigation. This chapter provides a brief explanation of the method adopted by the investigator in this study. It includes the research approach, research design, and variables, setting of the study,population, sample and sample size, sampling technique, description of the tool, pilot study, data collection procedure and plan for data analysis.

The present study aimed to evaluate the Effectivenessof Pranayama on stress among mothers of mentally retarded children in selected special school at Anbagam in Madurai.

3.1 RESEARCH APPROACH

The research approach is the most essential part of any research. The entire study is based on it. In this study Effectivenessof mothers of mentally retarded children was evaluated. Therefore a quantitative approach was used to test the effectiveness of pranayama.

3.2 RESEARCH DESIGN

The investigator used a Pre experimental (one group pretest post-test) designfor the study. There was a manipulation for the subjects without a control group and randomization.

Pretest	Intervention	Post test
O_1	X	O_2

O_1- Pretest to assess the level of stress among mothers of mentally retarded children on day1

X - Demonstration of pranayama 20 minutes, in the morning for 30consecutive days.

O_2 - Post test to determine the level of stress among mothers of mentally retarded childrenon32nd day.

3.3 VARIABLES

Independent variable **:** pranayama

Dependent variable **:**stressamong mothers of mentally retarded children.

Socio-demographic variables : Age, Religion, Education, Occupation, Total income of the family, Place of domicile, Marital status, Type of family, Type of delivery, Term of delivery at child birth, Number of children, Sex of the child, Duration of the study in this school.

3.4 SETTINGS OF THE STUDY

The setting was selectedbased on acquaintance of the investigator with the Institution, feasibility of conducting the study, availability of the sample, permission and proximity of the setting to investigation.

The study was conducted in mothers of mentally retarded children in selected special school at Anbagam in Madurai.

3.5 POPULATION

TARGET POPULATION

The study population comprises of mothers of mentally retarded children.

ACCESSIBLE POPULATION

Mothers of mentally retarded children in selected Anbagam special school at Madurai.

3.6 SAMPLE

Samples are subjects those who are the mothers of mentally retarded children in Anbagam special school, Pudhur, Madurai and those who fulfilled the inclusion criteria.

3.7 SAMPLE SIZE

40 Mothers of mentally retarded children who fulfill inclusion criteria.

3.8 SAMPLING TECHNIQUE

A sample for this study was selected through non probability-sampling (purposive sampling) technique.

3.9 CRITERIA FOR SAMPLE SELECTION

The study sample was selected by the following inclusion and exclusion criteria.

INCLUSION CRITERIA

- Mothers of mentally retarded children who were available during the data collectionperiod.
- Mothers ofmentally retarded children those who can understand either Tamil orEnglish.
- Mothers who were willing to participate in the study.

EXCLUSION CRITERIA

- ❖ Mothers who were physically ill.
- ❖ Mothers who have respiratory illness / disorder.
- ❖ Mother who attended yoga class previously.

3.10 RESEARCH TOOL AND TECHNIQUE:

TECHNIQUE : The technique used in this study was structured interview.

3.11 DESCRIPTION OF INSTRUMENT: The instrument consists of two sections:

SECTION : A It consists of a structured interview schedule, it has questions relate to the socio-demographic data of client.

SECTION : B Scale

- **Section A**: Socio-Demographic variables of mothers of mentally retarded children including Age, religion, education, occupation, income, domicile, marital status, type of family, type of marriage, type of delivery, term of delivery at birth, number of children, sex of the child, duration of study in special school etc.

- **Section B**: Perceived Stress Scale – a 14 item questionnaire (Dr. Sheldon Cohen's) completed by a Mothers with each answer scored on scale of 0 to 5 designed to measure the level of stress.

SCORING PROCEDURE AND TECHNIQUE

SCORING

Scores are obtained by reverse coding items 4,5,6,7,9,10 and 13 and then summing the reverse coded items with the remaining items 1,2,3,8,11,12

LEVEL OF STRESS	SCORES
Never	0
Almost Never	1
Sometimes	2
Fairly Often	3
Very Often	4

INTERPRETATION:

Total score	56
Low stress level	0 to 19
Moderate stress level	20 to 38
Higher perceived stress level	39 to 56

TESTING OF THE TOOL

3.12 RELIABILITY OF THE TOOL

The reliability of an instrument is the degree of consistency with which it measures the attribute and it is supposed to be measuring over a period of time. The Tool was a standardized one. The reliability of the Perceived Stress Scale was established by split half method, which researched a satisfactory reliabilityscore of r=0.85. Hence the tool was reliable and was used in this study.

3.13 VALIDITY

The tool used in this study was perceived stress scale and socio demographic profile proforma, which were validated by 5 experts including three nursing experts in

the field psychiatric nursing, one psychiatrist and one clinical psychologist. The experts were requested to check the relevance, sequence and adequacy of the items in the interview schedule.

3.14 PILOT STUDY

A pilot study was conducted at Anbagam special school, Anupanadi, in Madurai, among 10 mothers of mentally retarded children (who were not included in the main Study) who fulfilled the inclusion criteria with regard to the setting, with the cooperation of the people and the availability of the sample, in a manner in which a final study was done. It was carried over for the period of 7 days from 1.08.2014 to 7.08.2014. The findings of the pilot study revealed that the study was feasible and practicable. The structured interview schedule was found to be appropriate for the study. Data were analyzed to find out the practicability to conduct the study. The pilot study findings revealed that the study was feasible and practicable.

3.15PROCEDURE FOR DATA COLLECTION

METHOD OF DATA COLLECTION

1. After obtaining the formal permission from the Principal, College of Nursing, Institutional Review Board, Government Rajaji Hospital, Madurai. Formal permission was obtained from the concerned authority principal of mentally retarded children special school, Anbagam, Madurai.
2. The investigator explained the purpose of the study, oral and informed written consent was obtained from the subjects.
3. Collection of socio-demographic data among the Mothers of mentally retarded children, and the stress level was assessed by using perceived stress scale as a pretest.

4. The pranayama was implemented for 20 minutes, once a day in the morning (10am to 11am) for 30 consecutive days, post-test evaluation was conducted on the 32nd day of the study.
5. The data collection period was 4 to 6 weeks from 12th Aug 2014 to 15th Sep 2014.
6. Position – Sugasana

STEPS	TYPE OF BREATHING	TIMING
One	Inspiration and inspiration	4 seconds
Two	Breath holding	4 seconds
Three	Expiration and expiration	6 seconds
Four	Breath holding	2 seconds
Five	Relaxation	20 seconds

3.16 PLAN FOR DATA ANALYSIS

The data analysis involved the translation of information collected during the course of research project into an interpretable and managerial form. It involved the use of statistical procedures to give an organization and meaning to the data. Descriptive and inferential statistics used for data analysis. To compute the data, a master sheet was prepared by the investigator.

DESCRIPTIVE STATISTICS:

1. Analysis of the baseline data was done by using frequency and percentage.
2. The stress level of mothers of mentally retarded children was analyzed by computing frequency, percentage, mean and standard deviation.

INFERENTIAL STATISTICS

1.Paired t-test was used to evaluate the effectiveness of pranayama on stress level scores among the mothers of mentally retarded children.

2. Chi-square analyze was used to analyze association between pre-test stress among the mothers of mentally retarded children with their selected demographic variables. The data will be planned to present in the form of tables and figures.

3.17 PROTECTION OF HUMAN RIGHTS

Research proposal was approved by the Institutional Review Board. Prior to the pilot study and the main study permission was obtained from the principal of college of Nursing and Head mistress of Anbagam special school, Madurai. An oral and written consent of each study samples was obtained before starting the date collection. Positive benefits was explained to all the study subjects. They were also be explained that they may with draw from the study at any time without any penalty. Assurance was given to the subjects that confidentiality would be maintained throughout the study. Debriefing of the study results was done after the approval of dissertations.

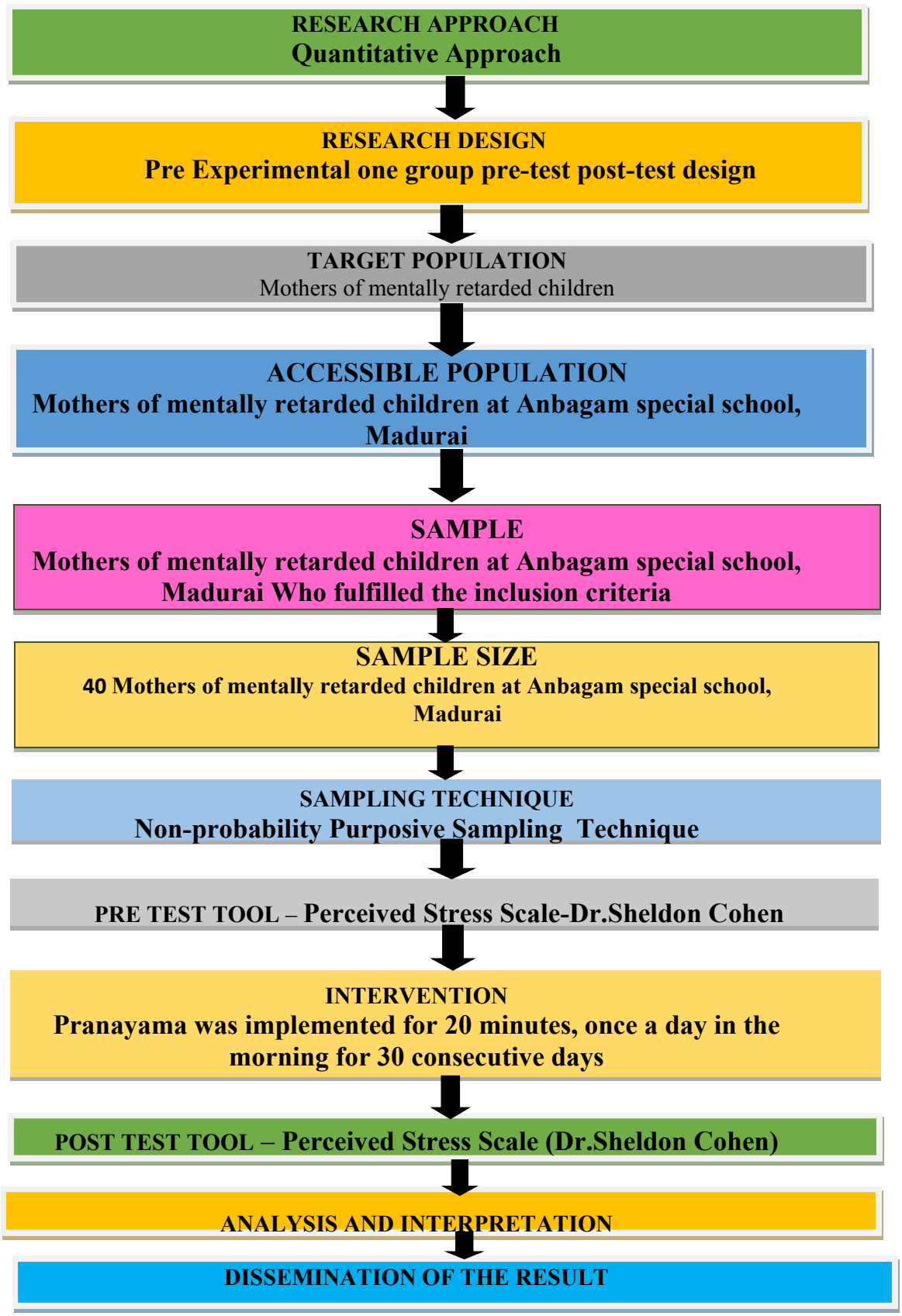

Figure 2: Schematic representation of research methodology

Data Analysis And Interpretation

CHAPTER – IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the description of sample, analysis, and interpretation of the data collected to evaluate the achievement of the objectives of the study. The data collected is tabulated and described as follows.

In this chapter the data collected were edited, tabulated, analyzed and interpreted. The findings were organized and presented in the following orderly sections.

The data collected were interpreted under the following sections:

SECTION 1

Distribution of mothers of mentally retarded children according to their selected socio demographic variables.

SECTION 11

Frequency and percentage distribution of stress level among the mothers of mentally retarded children.

SECTION 111

Effectiveness of pranayama onstress among the mothers of mentally retarded children.

SECTION IV

Association between the post test level of the stress among the mothers of mentally retarded children and their selected socio demographic variables.

SECTION – 1

TABLE–1: DISTRIBUTION OF MOTHERS OF MENTALLY RETARDED CHILDREN ACCORDING TO THEIR SELECTED SOCIO DEMOGRAPHIC VARIABLES.

n = 40

SOCIO DEMOGRAPHIC VARIABLES		f	%
AGE	20 -30 yrs	17	42.5%
	31 -40 yrs	21	52.5%
	41 -50 yrs	2	5.0%
RELIGION	Hindu	37	92.5%
	Christian	2	5.0%
	Muslim	1	2.5%
EDUCATION	No formal education	2	5.0%
	Primary education	10	25.0%
	Higher secondary	23	57.5%
	Graduate and above	5	12.5%
OCCUPATION	Private employee	14	35.0%
	Government employee	6	15.0%
	Labour	12	30.0%
	Self-employment	8	20.0%
TOTAL INCOME OF FAMILY	Rs 2001 – Rs3000	5	12.5%
	Rs 3001 - Rs 5001	15	37.5%
	>Rs 5000	20	50.0%
PLACE OF DOMICILE	Urban	15	37.5%
	Rural	23	57.5%
	Sub urban	2	5.0%
TYPE OF MARRIEGE	Consanguineous	11	27.5%
	Non- Consanguineous	29	72.5%
TYPE OF FAMILY	Joint family	30	75.0%
	Nuclear family	10	25.0%

TYPE OF DELIVERY	Normal vaginal delivery	18	45.0%
	Forceps delivery	11	27.5%
	LSCS	5	12.5%
	Vacuum suction delivery	6	15.0%
TERM OF DELIVERY AT CHILD BIRTH	Intra Uterine Growth Retardation	4	10.0%
	Pre term	12	30.0%
	Full term	24	60.0%
NUMBER OF CHILDREN	One child	9	22.5%
	Two children	28	70.0%
	Three and above	3	7.5%
SEX OF THE CHILD	Male child	29	72.5%
	Female child	11	27.5%
DURATION OF STUDY IN SPECIAL SCHOOL	Two years	18	45.0%
	Three years	12	30.0%
	Above three years	10	25.0%

Table 1: The above table portrays the distribution of mothers of mentally retarded children according to their socio demographic variables.

While discussing the socio demographic variables of the mothers of mentally retarded children:

When comparing the age group, the mothers of mentally retarded children,majority 21[52.5 %] belonged tothe age group of 31-40 years, 17[42.5%] belonged to the age group of 20-30 years, 2[5.0%] belonged to the age group of 40-50 years.

In the religion, most of the mothers of mentally retarded children, 37[92.5%] were Hindu, 2[5.0%] were christian and 1[2.5%] were muslim.

Regarding the educational status, 23[57.5%] have studied up to Higher secondary level, 10[25.0%] have studied up to primary level, 5[12.5%] have studied up to graduate and above, 2[5.0%] had no formal education.

While discussing the occupational status, majority 14[35.0%] were private employees, 12[30.0%] were labour and 8[20.0%] were self-employment and 6[15.0%] were government employee.

When comparing the total income of family, 20[50.0%] were earning Rs 2001–Rs 3000, 15[37.5%] were earning Rs 3001--Rs 5000 and 5[12.5%] were earning >Rs 5000.

Regarding the place of domicile, majority of the mothers of mentally retarded children, 23[57.5%] hailed from rural, 15[37.5%] hailed from urban and the remaining 2[5.0%] hailed from Sub urban.

While discussing the type of marriage, majority of the mothers of mentally retarded children, 29[72.5%] were non-consanguineous and the 11[27.5%] were belonged to consanguineous marriage.

When comparing the type of family, 30[75.0%] belonged to joint family, and 10[25.0%] belonged to nuclear family.

While discussing the type of delivery of the mothers of mentally retarded children, 18[45.0%] had normal vaginal delivery, 11[27.5%] had forceps delivery, 6[15.0%] had vacuum suction delivery and 5[12.5%] had LSCS delivery.

Regarding the term of delivery at child birth of the mothers of mentally retarded children, 24[60.0%] had delivered full term, 12[30.0%] had delivered pre term and 4[10.0%] had delivered Intra Uterine Growth Retardation children.

When comparing the number of children of the mothers of mentally retarded children, 28[70.0%] of mothers were having two children,9[22.5%] of mothers were having only one child and 3[7.5%] were having three and above.

When comparing the sex of the mentally retarded children, 29[72.5%] were male child and 11[27.5%] were female child.

Regarding the duration of study in the mentally retarded school, 18[45.0%] were studying two years, 12[30.0%] were studying three years and 10[25.0%] were studying above three years.

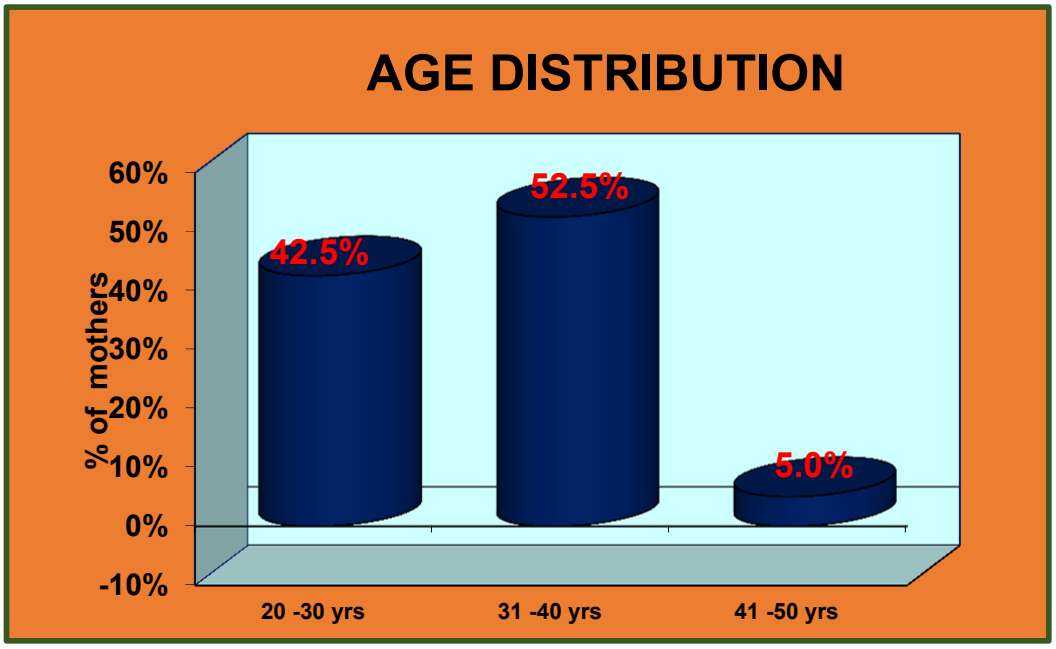

Figure 3: Cylinder diagram delineates the distribution of mothers of mentally retarded children according to their age.

Majority of the mothers of mentally retarded children, 21[52.5 %] belonged to the age group of 31-40 years, 17[42.5%] belonged to the age group of20-30 years, 2[5.0%] belonged to the age group of 40-50 years.

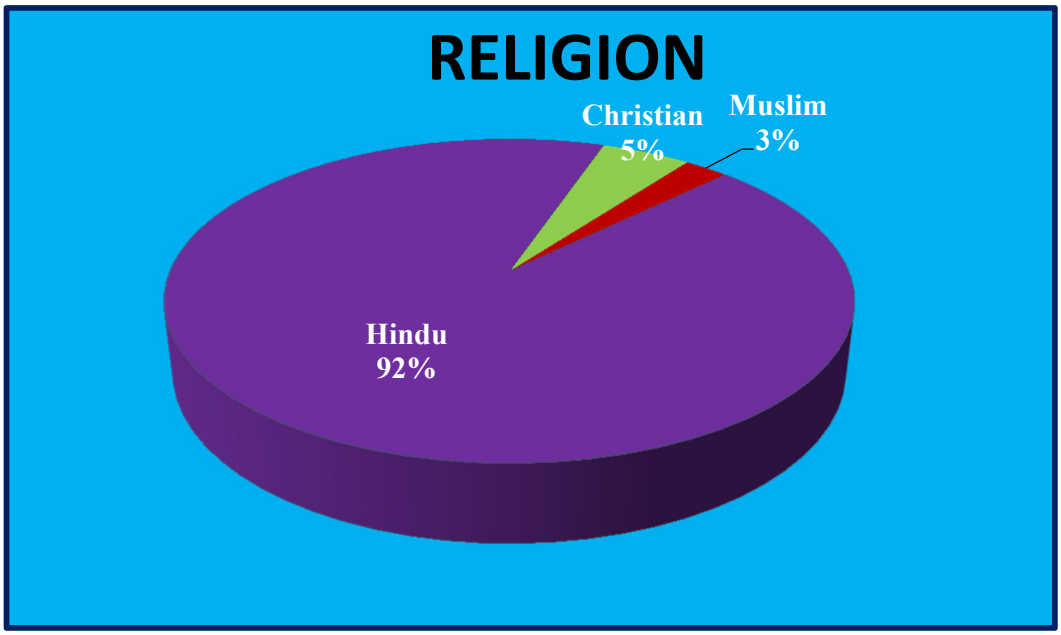

Figure 4: Pie diagram depicts the distribution of mothers of mentally retarded children according to their religion.

Most of the mothers of mentally retarded children, 37[92.5%] were hindu, 2[5.0%] were christian and 1[2.5%] were muslim.

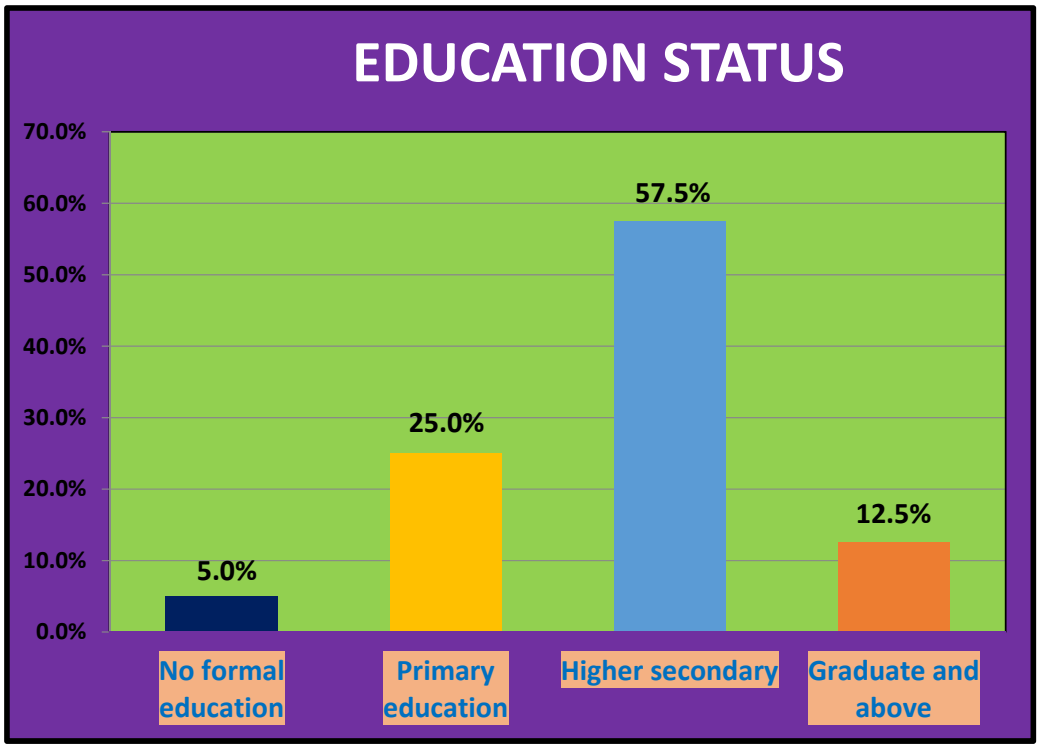

Figure 5: Column diagram portrays the distribution of mothers of mentally retarded children according to their education status.

Considering the educational status, 23[57.5%] have studied up to higher secondary level, 10[25.0%] have studied up to primary level, 5[12.5%] have studied up to graduate and above, 2[5.0%] had no formal education.

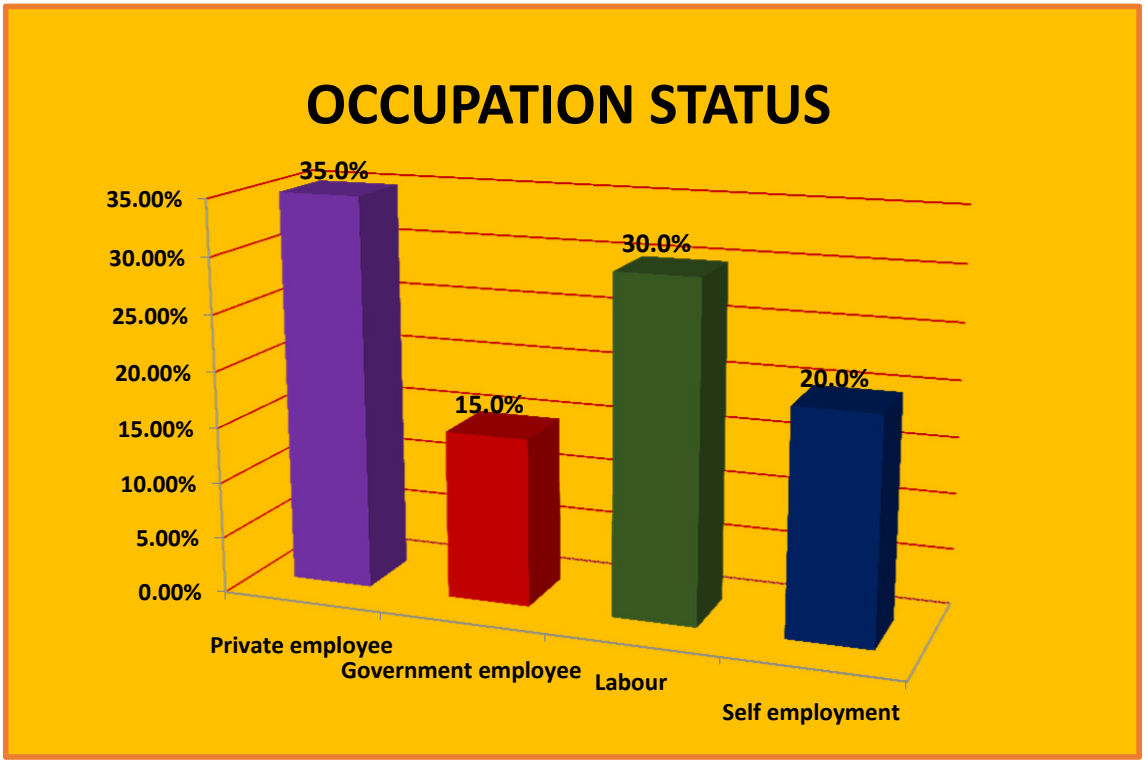

Figure 6: Column diagram identifies the distribution of mothers of mentally retarded childrenaccording to their occupation status.

Considering the occupational status, majority 14[35.0%] were private employees, 12[30.0%] were labour 8[20.0%] were self-employment and 6[15.0%] were government employee.

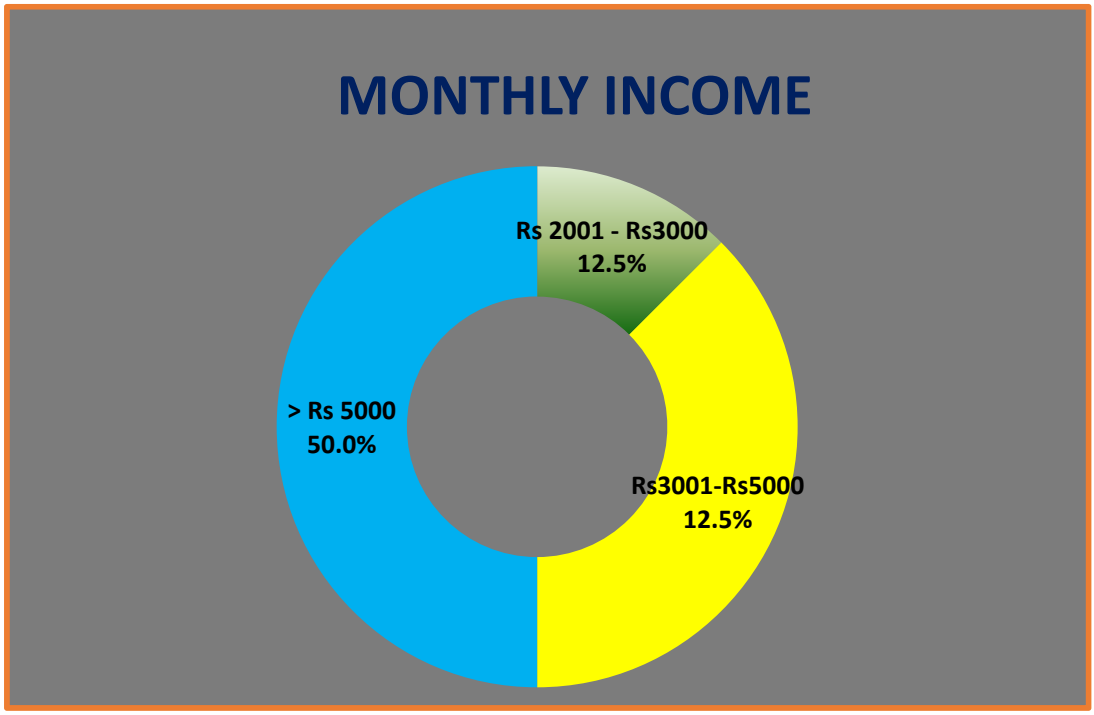

Figure 7: Pie diagram states the distribution of mothers of mentally retarded children according to their monthly income

Regarding total income of family, majority 20[50.0%] were earning Rs 2001 – Rs 3000, 15[37.5%] were earning Rs 3001 - Rs 5000 and 5[12.5%] were earning >Rs 5000.

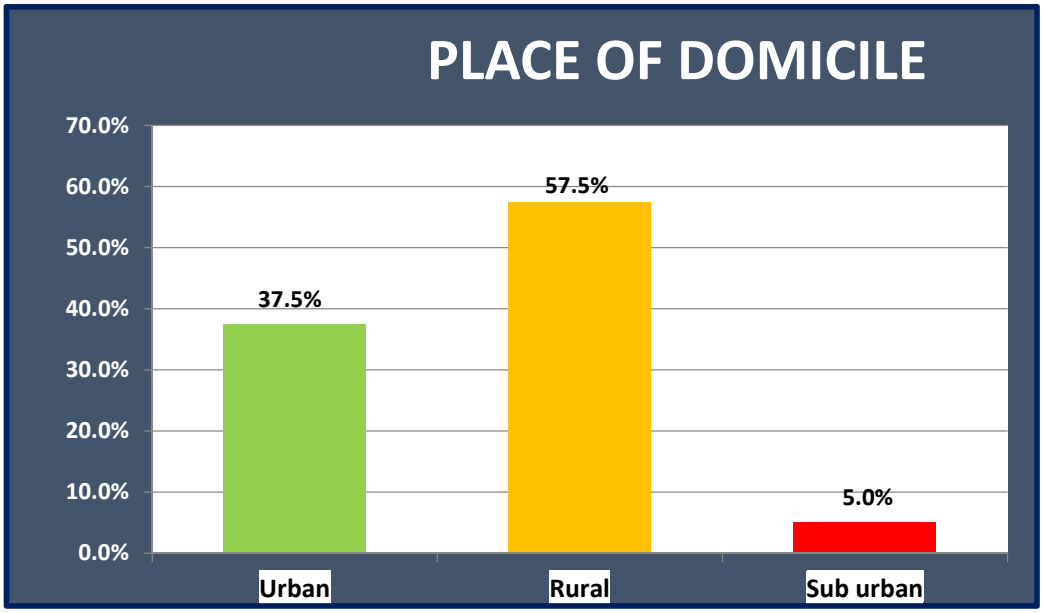

Figure 8: Column diagram manifests the distribution of mothers of mentally retarded children according to their place of domicile

In the place of domicile, majority of the mothers of mentally retarded children, 23[57.5%] were rural, 15[37.5%] were urban and the remaining 2[5.0%] were sub urban.

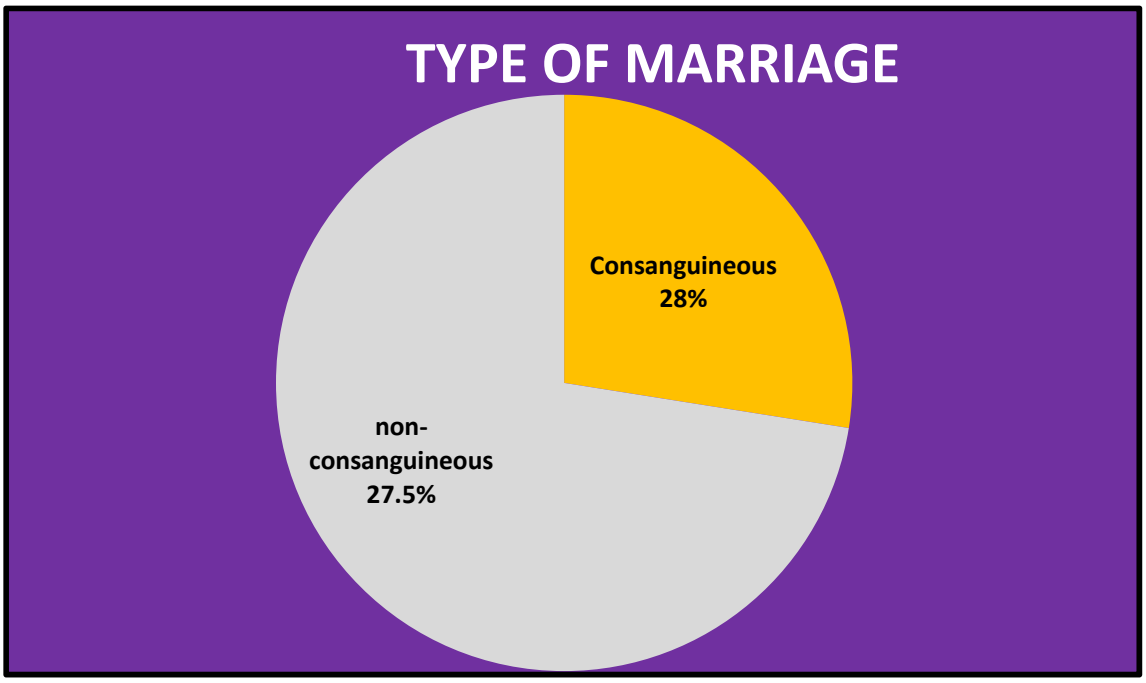

Figure 9: Pie diagram depicts the distribution of mothers of mentally retarded children according to their type of marriage

Majority of the mothers of mentally retarded children, 29[72.5%] were non-consanguineous and the 11[27.5%] were consanguineous marriage.

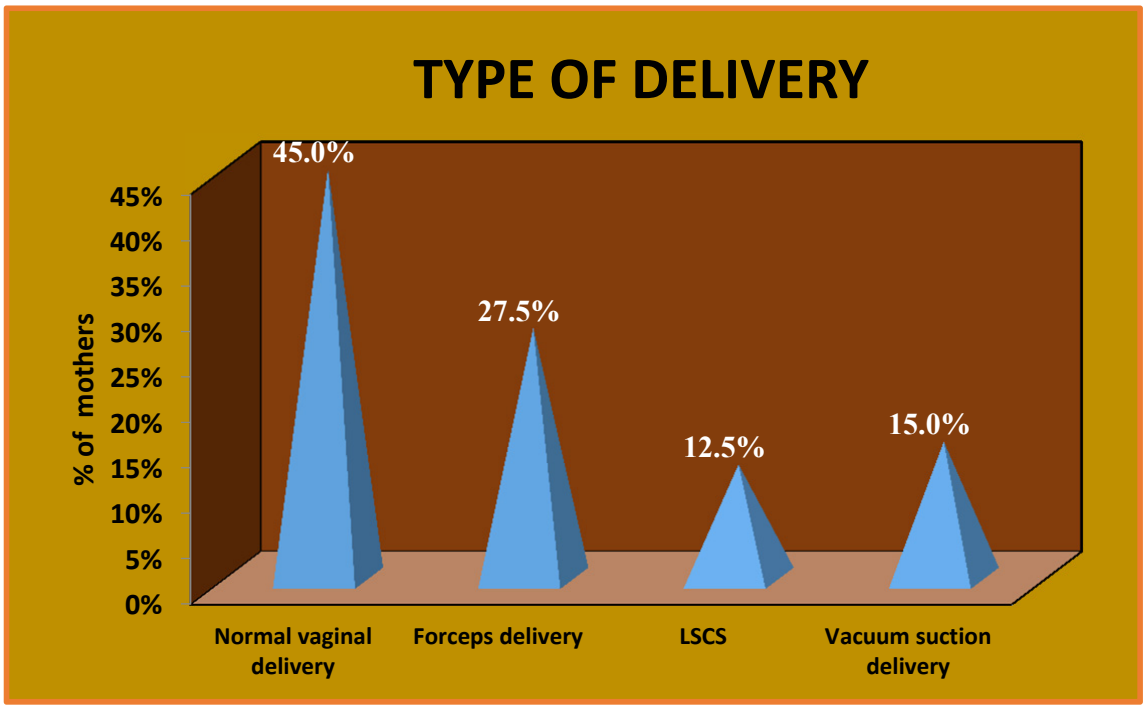

Figure 10: pyramid diagram explains the distribution of mothers of mentally retarded children according to their type of delivery.

Type of delivery of the mentally retarded children, 18[45.0%] had normal vaginal delivery, 11[27.5%] had forceps delivery, 6[15.0%] had vacuum suction delivery and 5[12.5%] had LSCS delivery.

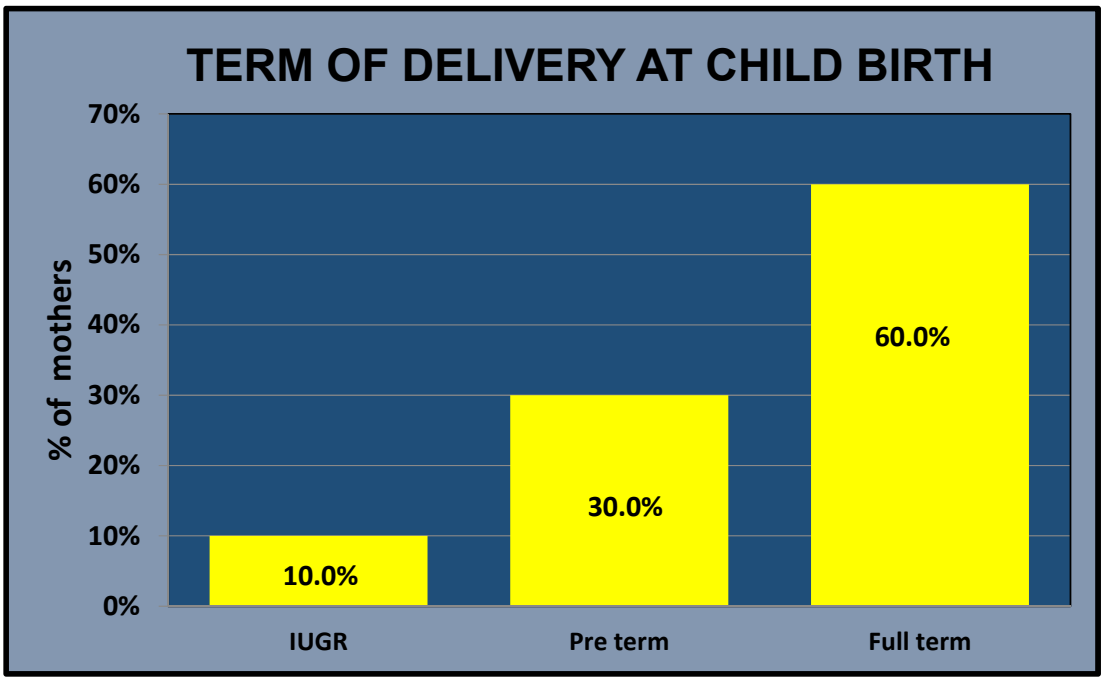

Figure 11: Simple bar diagram identifies distribution of mothers of mentally retarded children according to their term of delivery at child birth.

Regarding term of delivery at child birth of the mothers of mentally retarded children, 24[60.0%] had delivered full term, 12[30.0%] had delivered pre term and 4[10.0%] had delivered Intra Uterine Growth Retardation children.

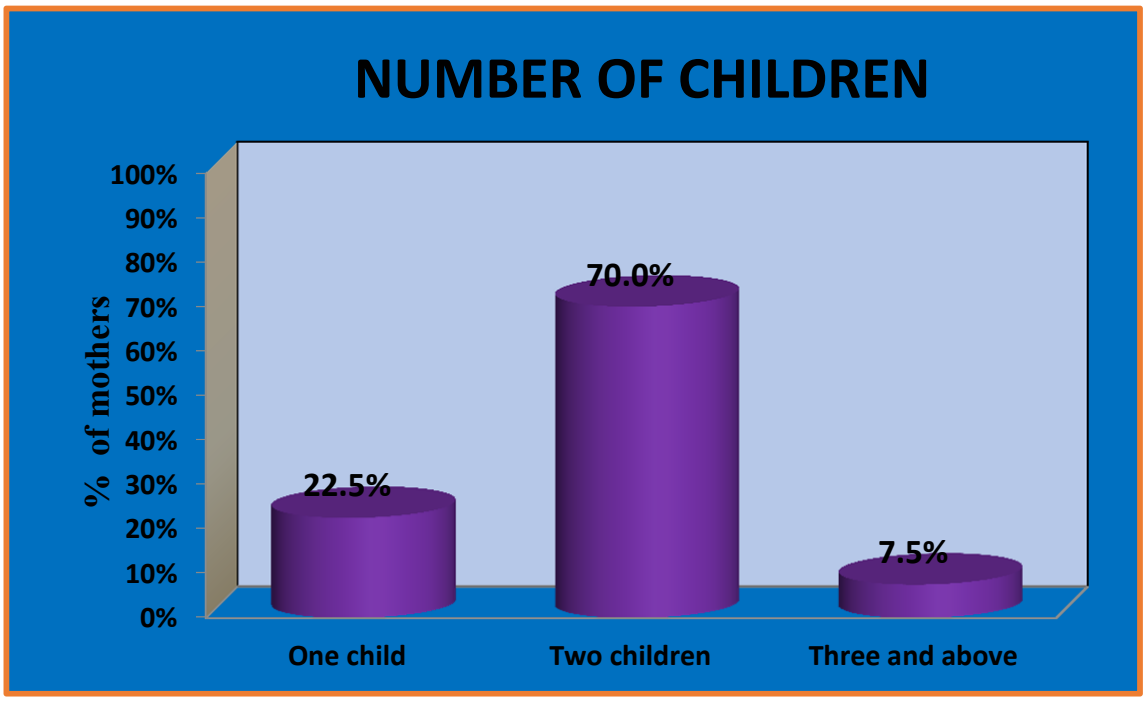

Figure 12: Cylinder diagram portraysthe distribution of mothers of mentally retarded children according to their number of children.

Considering the number of children among, mothers of mentally retarded children, 28[70.0%] were having two children, 9[22.5%] were having only one child and 3[7.5%] were having three and above children.

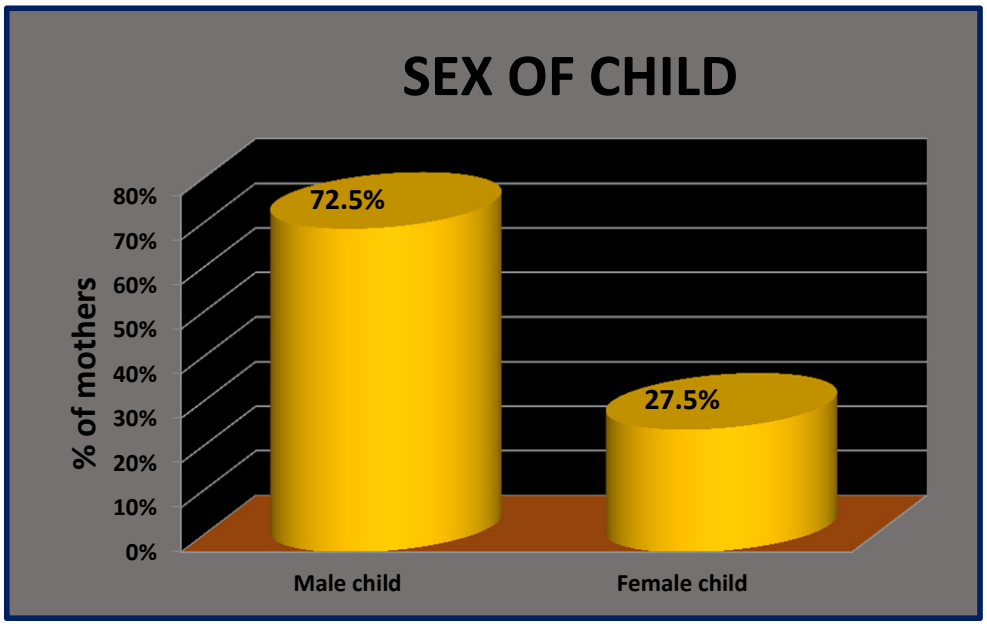

Figure 13: Cylinder diagram explains the distribution of mothers of mentally Retarded children according to their sex of child

Among the sex of the mentally retarded children, 29[72.5%] were male child and 11[27.5%] were female child.

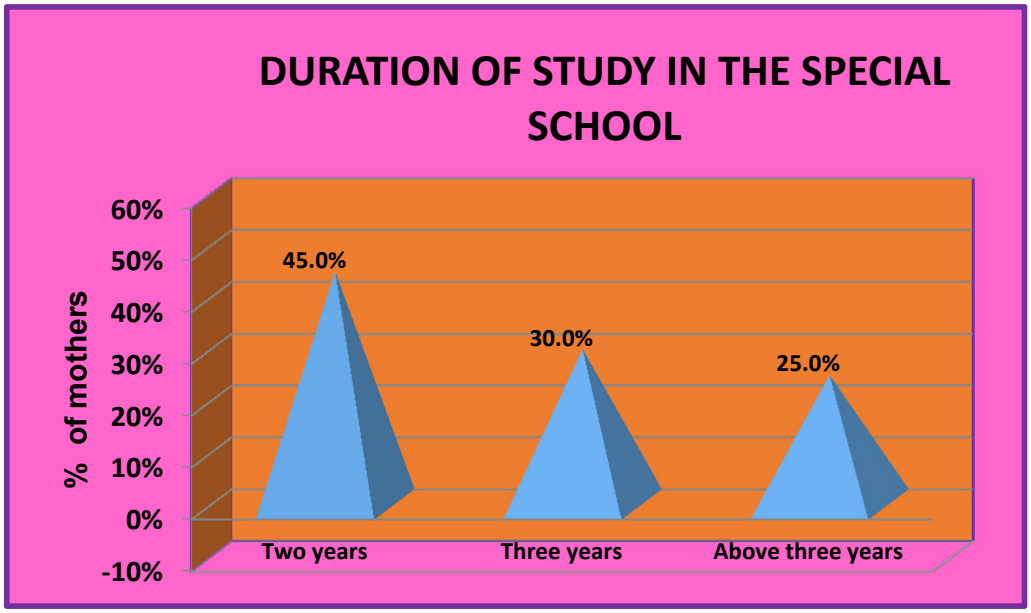

Figure 14: pyramid diagram depicts the distribution of mentally retarded children according to their duration of study in the special school.

Considering the duration of study in the mentally retarded school, 18[45.0%] were two years, 12[30.0%] were studying three years and 10[25.0%] were studying above three years.

SECTION - 11

TABLE–2: FREQUENCY AND PERCENTAGE DISTRIBUTION OF STRESS LEVEL AMONG THE MOTHERS OF MENTALLY RETARDED CHILDREN

n = 40

Level of stress	**Pretest**		**Post test**	
	(f)	**(%)**	**(f)**	**(%)**
Low	13	32.5%	28	70.0%
Moderate	17	67.5%	12	30.0%
High perceived	0	0.0%	0	0.0%
Total	40	100%	40	100%

Table 2: depicts the pre-test and post test stress score among mothers of mentally retarded children at special school in Madurai. In pre test 13[32.5%] of the mothers of mentally retarded children were having mild stress, 17[65.0%] of them were having moderate stress and none of them were having high stress.

In post test 28[70.0%] of the mothers of mentally retarded children were having low stress, 12[30.0%] were having mild stress, none of them were having high stress.

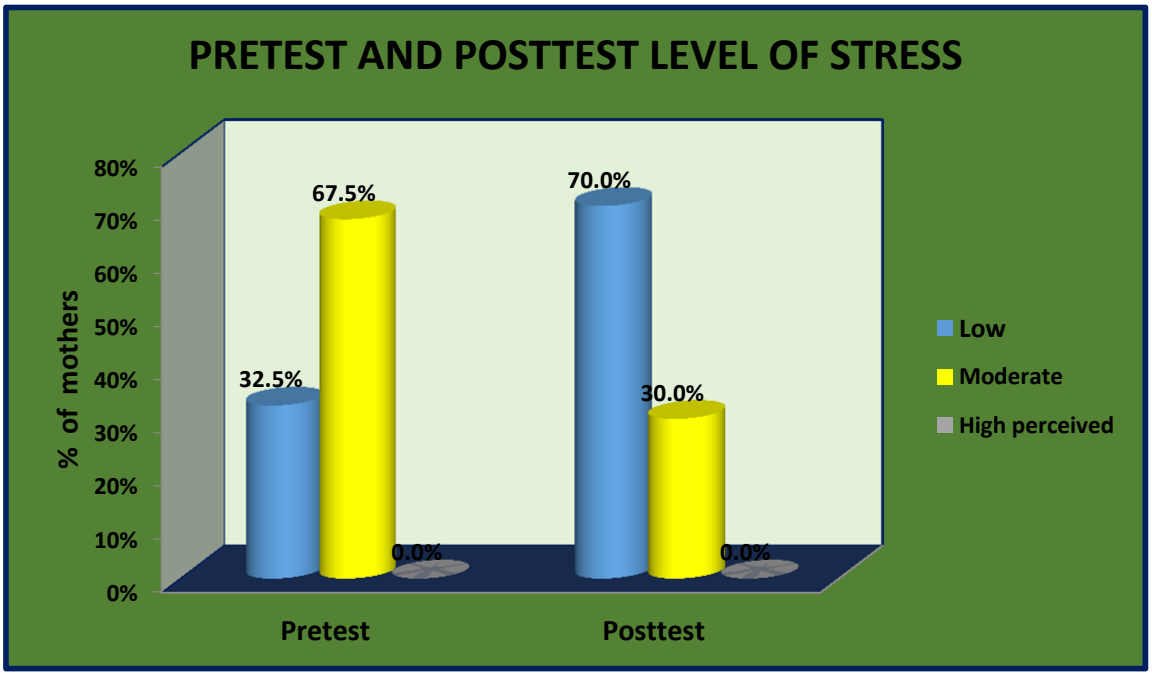

Figure 15: Multiple cylinder diagram portrays distribution of subjects according to their level of stress.

Regarding pre-test and post test stress among mothers of mentally retarded children at special school in Madurai. In pre test 13[32.5%] of the mothers of mentally retarded children were having mild stress, 17[65.0%] of them were having moderate stress, and none of them were having high stress.

In post test 28[70.0%] of the mothers of mentally retarded children were having low stress, 12[30.0%] were having mild stress, and none of them were having high stress.

SECTION III

TABLE–3: EFFECTIVENESS OF PRANAYAMA ON STRESS AMONG THE MOTHERS OF MENTALLY RETARDED CHILDREN:

Variable	Mean	Mean Difference	SD	' t' - Value	'P' – Value
Pretest	24.55	8.57	6.51	10.20	0.001***
Posttest	15.98		3.70	TV= 3.55	

***significant at 0.001

Table 3: depicts the mean in the pre test and post test was 24.25 and 15.98 and standard deviation in the pre test and post test was 6.51 and 3.70. The mean difference was 8.57. The paired "t" test value was10.20 which was greater than the table value, which was significant at 0.001.Hence it was evidenced that pranayama was more effective in terms of reducing stress among the mothers of mentally retarded children.

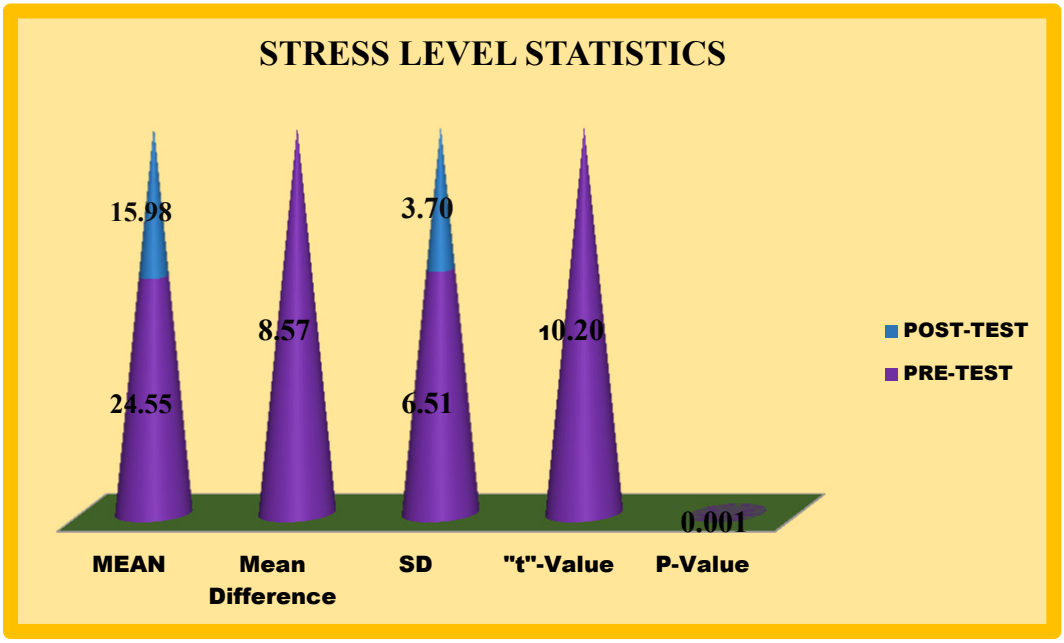

Figure 16: Cone diagram depicts the effectiveness of pranayama on stress among mothers of mentally retarded children

The above figure depicts that the mean of the pre test and post test was 24.55and 15.98 and standard deviation of the pre test and post test was 6.51 and 3.70 respectively. The mean difference was 8.57. The paired 't' test value was 10.20. 'P' value was 0.001. It was significant at 5% level of significance.

TABLE-4: COMPARISON OF MEAN STRESS SCORE

n=40

	No. of mothers of mentally retarded children	Mean ± SD	Mean difference	Student's paired t-test
Pretest	40	24.55±6.51	8.57	t=10.20 P=0.001*** significant
Posttest	40	15.98±3.70		

*** Significant at 0.001

Table 4 : depicts the comparison of mean stress score between pre test and post test. The pre test mean stress score was 24.55 with a standard deviation 6.51, whereas post test mean stress score was 15.98 with a standard deviation 3.70. Mean difference is 8.57.

The student paired 't' was done to find out the difference between the pre test and post test score, 't' 10.20 was greater than the table value which was significant at 0.001 level. This shows that the difference in the score was due to the intervention (Pranayama) and also this proves that the Pranayama was effective in reducing the stress score among mothers of mentally retarded children.

COMPARISION OF MEAN STRESS SCORE

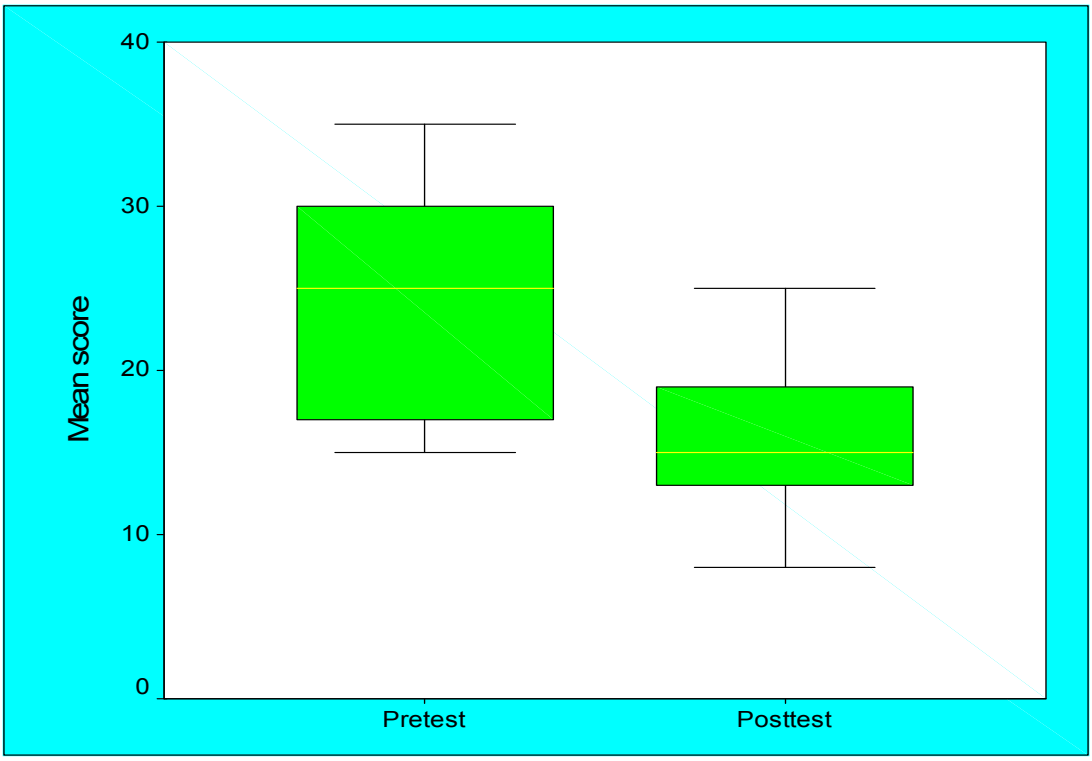

Figure 17: Box-plot diagram portrays the mean pre test-post test score among mothers of mentally retarded children. The pre test mean score was 24.55 with a standard deviation of 6.51, whereas the post test mean score was 15.98 with a standard deviation 3.70mean difference is 8.57.

TABLE-5: COMPARISON OF STRESS REDUCTION SCORE

n=40

	Maximum score	Mean knowledge score	Mean Difference in stress reduction with 95% Confidence Interval	Percentage of stress reduction with 95% Confidence interval
Pretest	56	24.55	8.57(6.88 –10.27)	↓15.3% (12.3% –18.3%)
Posttest	56	15.98		

Table 5: Describes the effectiveness of pranayama on stress among mothers of mentally retarded children.

On an average, after receiving Pranayama, mothers of mentally retarded children stress was reduced 15.3% than pre test score. Differences between pre test and post test score was analyzed using proportion with 95% confidence interval and mean difference with 95% confidence interval. This 15.3% reduction score shows the effect of Pranayama on stress among mothers of mentally retarded children.

SECTION IV

TABLE-6: ASSOCIATION BETWEEN POST TEST LEVEL OF STRESS AMONG MOTHERS OF MENTALLY RETARDED CHILDREN AND THEIR SELECTED SOCIO DEMOGRAPHIC VARIABLES:

n=40

Socio Demographic variables		POST TEST LEVEL OF STRESS					
		Low		Moderate			
		f	%	f	%	Total	χ^2
AGE	20 -30 yrs	8	47.1%	9	52.9%	17	**χ^2=7.58 P=0.02***
	31 -40 yrs	18	85.7%	3	14.3%	21	
	41 -50 yrs	2	100.0%	0	0.0%	2	
RELIGION	Hindu	26	70.3%	11	29.7%	37	χ^2=0.81 P=0.66
	Christian	1	50.0%	1	50.0%	2	
	Muslim	1	100.0%			1	
EDUCATION	No formal education	0	0.0%	2	100.0%	2	**χ^2=11.38 P=0.01***
	Primary education	5	50.0%	5	50.0%	10	
	Higher secondary	19	82.6%	4	17.4%	23	
	Graduate and above	4	80.0%	1	20.0%	5	
OCCUPATION	Private employee	11	78.6%	3	21.4%	14	χ^2=1.79 P=0.63
	Government employee	3	50.0%	3	50.0%	6	
	Labour	8	66.7%	4	33.3%	12	
	Self employment	6	75.0%	2	25.0%	8	
TOTAL INCOME OF FAMILY	Rs2001 - Rs3000	2	40.0%	3	60.0%	5	χ^2=2.85 P=0.24
	Rs3001- Rs 5001	12	80.0%	3	20.0%	15	
	>Rs 5000	14	70.0%	6	30.0%	20	

PLACE OF DOMICILE	Urban	12	80.0%	3	20.0%	15	
	Rural	14	60.9%	9	39.1%	23	$\chi 2=2.48$ P=0.28
	Sub urban	2	100.0%			2	
TYPE OF MARRIEGE	Consanguineous	9	81.8%	2	18.2%	11	$\chi 2=1.00$ P=0.31
	Non-Consanguineous	19	65.5%	10	34.5%	29	
TYPE OF FAMILY	Joint family	24	80.0%	6	20.0%	30	**$\chi 2=5.71$ P=0.02***
	Nuclear family	4	40.0%	6	60.0%	10	
TYPE OF DELIVERY	Normal vaginal delivery	14	77.8%	4	22.2%	18	
	Forceps delivery	7	63.6%	4	36.4%	11	$\chi 2=6.71$
	LSCS	5	100.0%			5	P=0.07
	Vacuum suction delivery	2	33.3%	4	66.7%	6	
TERM OF DELIVERY AT CHILD BIRTH	IUGR	2	50.0%	2	50.0%	4	$\chi 2=1.11$ P=0.57
	Pre term	8	66.7%	4	33.3%	12	
	Full term	18	75.0%	6	25.0%	24	
NUMBER OF CHILDREN	One child	7	77.8%	2	22.2%	9	$\chi 2=0.33$ P=0.85
	Two children	19	67.9%	9	32.1%	28	
	Three and above	2	66.7%	1	33.3%	3	
SEX OF THE CHILD	Male child	21	72.4%	8	27.6%	29	$\chi 2=0.29$ P=0.58
	Female child	7	63.6%	4	36.4%	11	
DURATION OF STUDY IN THE SCHOOL	Two years	15	83.3%	3	16.7%	18	
	Three years	7	58.3%	5	41.7%	12	$\chi 2=2.77$ P=0.24
	above three years	6	60.0%	4	40.0%	10	

*** Significant at 0.05% level**

Table 6: manifests the association between the post stress score among mothers of mentally retarded children and their selected socio demographic variables. Chi-square analysis revealed that, there was a significant association between the level of stress score and age, education and type of family. All other variables were not significantly associated among the mothers of mentally retarded children with their post test score.

TABLE-7: ASSOCIATION BETWEEN LEVEL OF STRESS REDUCTION AMONG MOTHERS OF MENTALLY RETARDED CHILDREN AND THEIR SELECTED SOCIO DEMOGRAPHIC VARIABLES:

n=40

Demographic variables		LEVEL OF STRESS REDUCTION				Total	χ^2
		Below mean average(≤8.57)		Above mean average(>8.57)			
		f	%	f	%		
AGE	20 -30 yrs	12	70.6%	5	39.4%	17	
	31 -40 yrs	8	38.1%	13	61.9%	21	**χ^2=6.07P=0.05***
	41 -50 yrs	0	0.0%	2	100.0%	2	
RELIGION	Hindu	19	51.4%	18	48.6%	37	
	Christian			2	100.0%	2	χ^2=3.02 P=0.22
	Muslim	1	100.0%			1	
EDUCATION	No formal education	2	100.0%	0	0.0%	2	
	Primary education	8	80.0%	2	20.0%	10	**χ^2=8.48 P=0.04***
	Higher secondary	9	39.1%	14	60.9%	23	
	Graduate and above	1	20.0%	4	80.0%	5	
OCCUPATION	Private employee	7	50.0%	7	50.0%	14	
	Government employee	2	33.3%	4	66.7%	6	χ^2=5.66 P=0.12
	Labour	9	75.0%	3	25.0%	12	
	Self employment	2	25.0%	6	75.0%	8	

TOTAL INCOME OF FAMILY	Rs2001- Rs3000	4	80.0%	1	20.0%	5	$\chi 2$=2.40 P=0.30
	Rs3001- Rs5001	6	40.0%	9	60.0%	15	
	>Rs 5000	10	50.0%	10	50.0%	20	
PLACE OF DOMICILE	Urban	5	33.3%	10	66.7%	15	$\chi 2$=4.05 P=0.13
	Rural	13	56.5%	10	43.5%	23	
	Sub urban	2	100.0%			2	
TYPE OF MARRIEGE	Consanguineous	5	45.5%	6	54.5%	11	$\chi 2$=0.12 P=0.72
	Non-Consanguineous	15	51.7%	14	48.3%	29	
TYPE OF FAMILY	Joint family	12	40.0%	18	60.0%	30	**$\chi 2$=4.80 P=0.03***
	Nuclear family	8	80.0%	2	20.0%	10	
TYPE OF DELIVERY	Normal vaginal delivery	9	50.0%	9	50.0%	18	$\chi 2$=0.50 P=0.77
	Forceps delivery	5	45.5%	6	54.5%	11	
	LSCS	2	40.0%	3	60.0%	5	
	Vacuum suction delivery	4	66.7%	2	33.3%	6	
TERM OF DELIVERY AT CHILD BIRTH	IUGR	2	50.0%	2	50.0%	4	$\chi 2$=1.89 P=0.16
	Pre term	7	58.3%	5	41.7%	12	
	Full term	11	45.8%	13	54.2%	24	
NUMBER OF CHILDREN	One child	5	55.6%	4	44.4%	9	$\chi 2$=3.68 P=0.16
	Two children	12	42.9%	16	57.1%	28	
	Three and above	3	100.0%			3	

SEX OF THE CHILD	Male child	11	37.9%	18	62.1%	29	$\chi 2$=6.14 P=0.01
	Female child	9	81.8%	2	18.2%	11	
DURATION OF STUDY IN THE SCHOOL	Two years	9	50.0%	9	50.0%	18	$\chi 2$=0.00P=1.00
	Three years	6	50.0%	6	50.0%	12	
	Above three years	5	50.0%	5	50.0%	10	

Table 7: Explains the association between level of stress reduction among mothers of mentally retarded children with their selected socio demographic variables.Chi-square analysis revealed that there was association between the level of stress reduction and age (41-50 years), education (higher education) and type of family (joint family) were benefited more than others. Statistical significance was calculated using chi square analysis.

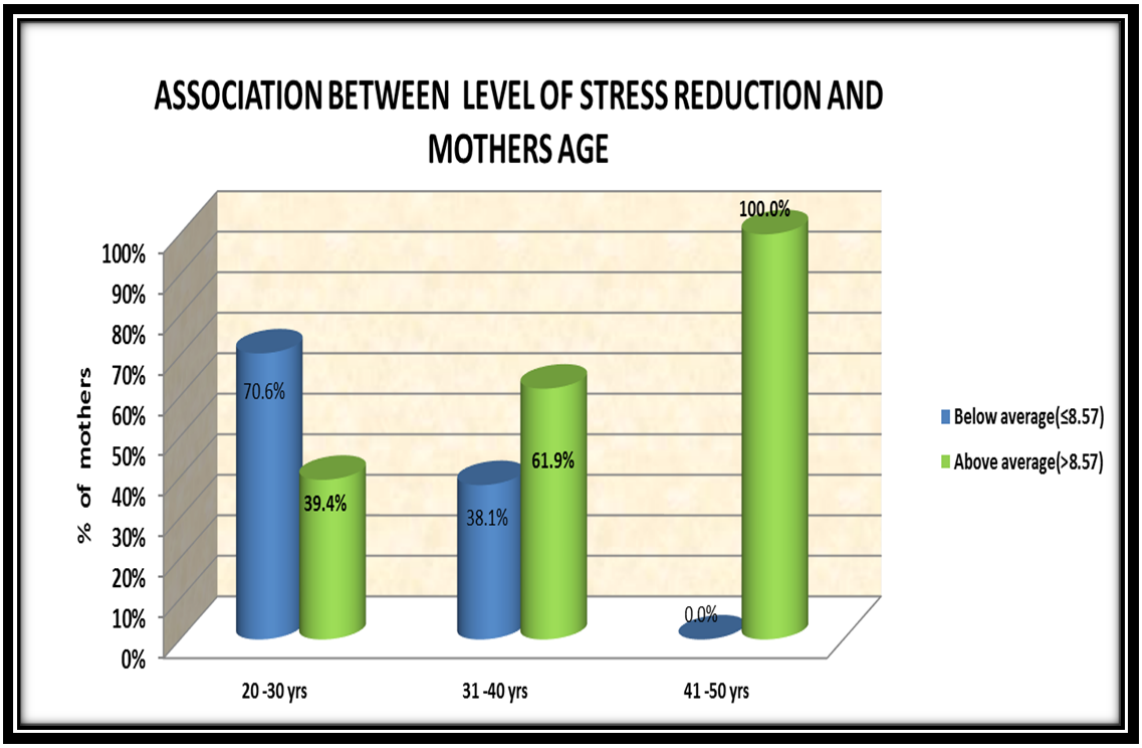

Figure 18: Multiple cylinder diagram delineates the association between level of stress reduction among mothers of mentally retarded children with their age.

According to age, among mothers of mentally retarded children, the age group of 41-50 years were reduced more stress than other age groups.

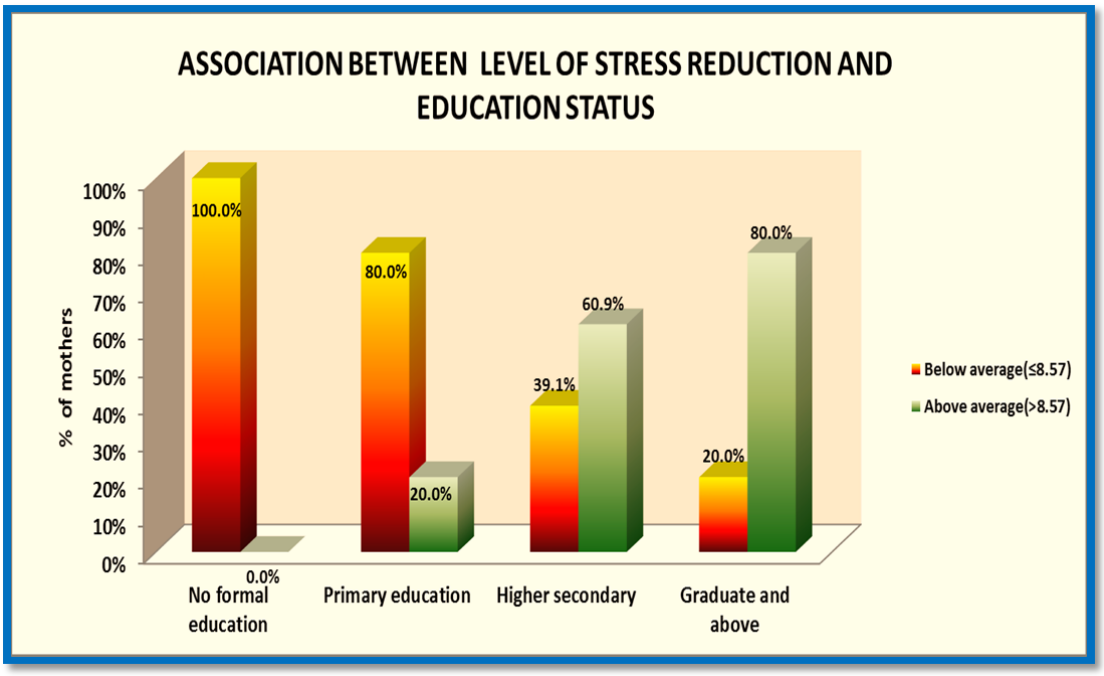

Figure 19: Multiple bar diagram delineates the association between level of stress reduction among mothers of mentally retarded children with their education status.

According to the educational status, the higher secondary education status were reduced more stress than other education status.

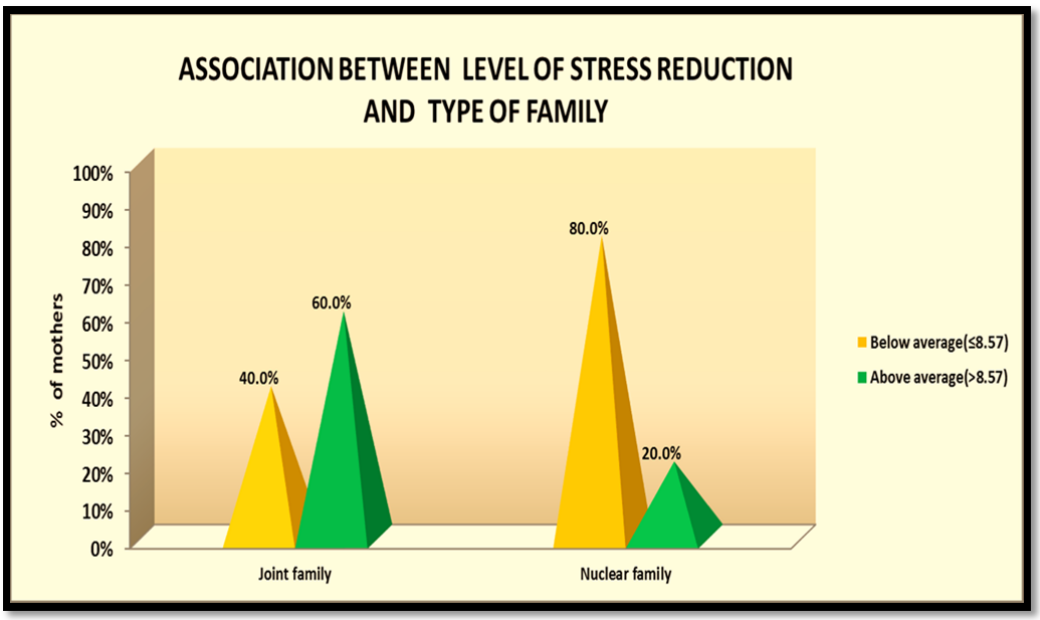

Figure 20: Pyramid diagram portrays the association between the level of stress reduction and type of family of the mothers of mentally retarded children.

According to type of family, among mothers of mentally retarded children, the joint family were reduced more stress than nuclear family.

Discussion

CHAPTER - V

DISCUSSION

This chapter deals about the results of the study interpreted from the statistical analysis. Mentally retardation is not a disease but it affects every aspect of their life, better psychological perception about their life tends to reduce their stress and this in turn improves the quality of life among mothers of mentally retarded children. It gives soul to the universe, wings to the mind, flight to the imagination, a charm to sadness gaiety and life to everything. It is the essence of order, and leads to all that is good and beautiful.

The present study was conducted to evaluate the effectiveness of pranayama on stress among mothers of mentally retarded children at selected special school in Madurai. 40 samples were selected by purposive sampling technique. The stress levels of subjects were assessed with standardized perceived stress scale.

5.1 DISTRIBUTION OF SUBJECTS ACCORDING TO THEIR SOCIO DEMOGRAPHIC VARIABLES:

When comparing the age group, the mothers of mentally retarded children, majority 21[52.5 %] belonged to the age group of 31-40 years, 17[42.5%] belonged to the age group of 20-30 years, 2[5.0%] belonged to the age group of 40-50 years.

In the religion, most of the mothers of mentally retarded children, 37[92.5%] were hindu, 2[5.0%] were christian and 1[2.5%] were muslim.

Regarding the educational status, 23[57.5%] have studied up to Higher secondary level, 10[25.0%] have studied up to primary level, 5[12.5%] have studied up to graduate and above, 2[5.0%] had no formal education.

While discussing the occupational status, majority 14[35.0%] were private employees, 12[30.0%] were labour and 8[20.0%] were self-employment and 6[15.0%] were government employee.

When comparing the total income of family, 20[50.0%] were earning Rs 2001 – Rs 3000, 15[37.5%] were earning Rs 3001 - Rs 5000 and 5[12.5%] were earning >Rs 5000.

Regarding the place of domicile, majority of the mothers of mentally retarded children, 23[57.5%] hailed from rural, 15[37.5%] hailed from urban and the remaining 2[5.0%] hailed from sub urban.

While discussing the type of marriage, majority of the mothers of mentally retarded children, 29[72.5%] were non-consanguineous and the 11[27.5%] were belonged to consanguineous marriage.

When comparing the type of family, 30[75.0%] belonged to joint family, and 10[25.0%] belonged to nuclear family.

While discussing the type of delivery of the mothers of mentally retarded children, 18[45.0%] had normal vaginal delivery, 11[27.5%] had forceps delivery, 6[15.0%] had vacuum suction delivery and 5[12.5%] had LSCS delivery.

Regarding the term of delivery at child birth of the mothers of mentally retarded children, 24[60.0%] had delivered full term, 12[30.0%] had delivered pre term and 4[10.0%] had delivered Intra Uterine Growth Retardation children.

When comparing the number of children of the mothers of mentally retarded children, 28[70.0%] of mothers were having two children, 9[22.5%] of mothers were having only one child and 3[7.5%] were having three and above.

When comparing the sex of the mentally retarded children, 29[72.5%] were male child and 11[27.5%] were female child.

Regarding the duration of study in the mentally retarded school, 18[45.0%] were studying two years, 12[30.0%] were studying three years and 10[25.0%] were studying above three years.

5.2 DISCUSSION OF THE STUDY BASED ON ITS OBJECTIVES:

The first objective of the study was to assess the level of stress among mothers of mentally retarded children at selected special school in Madurai.

Perceived stress scale was used in this study to assess the level of stress among mothers of mentally retarded children at Anbagam special school in Madurai.In the pre test majority of them 13[32.5%] having low stress, 17[67.5%] of them were having moderate stress.

These findings were supported by Aesha John (2012) in a study regarding prevalence of stress among mothers of mentally retarded children. Majority of the mothers of mentally retarded children had moderate to low level stress.

These findings were also consistent with the findings of evidenced by Mary (1990) found that almost all mothers reported strong feelings for their child immediately after receiving the news of the disabling condition. The most commonly expressed negative emotion was a feeling of stress, which had lessened over time.

The second objective of the study was to evaluate the effectiveness of pranayama on stress among mothers of mentally retarded children at selected special school in Madurai.

In the pre-test, majority of the subjects 13(32.5%) had mild stress, 17(65.0%) had moderate stress. In the post test, 28(70.0%) were in low stress, 12(30.0%) were in the mild stress, whereas no persons in severe and extreme stress.

The mean pre test was 24.55 and mean post test was 15.98 respectively with a standard deviation of the pre test was 6.51 and post- test standard deviation was 3.70. The mean difference is 8.57.

The student paired 't' test was done to find out the difference between pre-test and post test score. The paired't' test value 10.20 was greater than table value (3.55) which was significant at 0.001 level.

Difference between the pre test and post test was analysed using proportion with 95% confidence interval and mean difference with 95% confidence interval. This difference shows the effect of pranayama on stress among mothers of mentally retarded children.

These findings was congruent with the study done by Benson.H.(2004) states that pranayama decreases oxygen demands, heart rate, respiratory rate and blood pressure, and increases the intensity of alpha, beta and delta waves, that decreases the

psychological changes occurring during the stress response. so, it reduces the stress level among mothers of mentally retarded children.

These findings were supported by a study conducted by Dr. Young (2000) studied the reduction of stress among mothers of mentally retarded children in Victoria University. He conducted stress reduction programme. In that meditation, yoga, relaxation techniques are included as part of the programme. Mothers of mentally retarded children actively participated in this programme for 8 week session. The results were very positive.

Hence the stated hypotheses H_1: "There is a significant difference in the level of stress among mothers of mentally retarded children after pranayama" was accepted.

The third objective of the study was to associate the post test level of stress among mothers of mentally retarded children at selected special school in Madurai with their selected demographic variables.

Chi square analysis was calculated to determine the association between the selected socio demographic variables and the level of stress among the mothers of mentally retarded children.

Table 6 portrays theassociation between post test level of stress and selected socio demographic variables among mothers of mentally retarded children. Chi-square analysis revealed that there was a significant association between post test level of stress and age ($\chi 2=7.58$), education ($\chi 2 = 11.38$) and type of family ($\chi 2 = 5.71$) among mothers of mentally retarded children in Anbagam special school.

There was no significant association between the post test level of stress and the other socio demographic variables such as, religion, occupation, total income of the family, place of domicile, type of marriage, type of delivery, term of delivery at child birth, number of children, sex of the child, duration of study in the school.

Table 7 explains the association between level of stress reduction score among mothers of mentally retarded children with their selected socio demographic variables. Chi- square analysis revealed that there was association between the level of stress reduction score and age (41-50 years), education (higher education), and type of family (joint family) were benefited more than others.

These findings were also consistent with the findings of Ms.Naila Rashid **(**2012)conducted the study on the effectiveness of pranayama on stress among mothers of mentally challenged children in Hyderabad. Mental retardation is a serious problem affecting a large number of people. Amongst them the mothers are worse off than average. The study focuses on the excluded mothers of mentally retarded, how they are unable to send their children to special schools due to lack of awareness and money. So it can be concluded that doing pranayama, reduces the stress on mothers who are having mentally retarded children. Then these parents would be able to overcome this stressful situation.

It was also supported by Prisi.A (2009)A randomised comparative trial was conducted to assess the effect of pranayama on stress among 131 subjects from the community in South Australia. Experiment group received one hour session of pranayama for ten weeks. Stress level was assessed with perceived stress scale. The study revealed that pranayama were found to be effective in reducing stress level of mentally retarded children mothers, and improving health status.

The findings suggested that pranayama was effective in reducing stress and the stress scores were associated with age, education status, and type of family.

Hence the stated hypothesis H_2:"There is a significant association between the level of stress among the mothers of mentally retarded children with their selected socio demographic variables" was accepted.

Summary, Conclusion & Recommendations

CHAPTER – VI

SUMMARY, CONCLUSION, IMPLICATIONS AND RECOMMENDATIONS

This chapter presents the summary of the study and conclusion drawn, clarifies the limitation of the study, the implications and the recommendations, different areas like nursing practice, nursing education, nursing administration and nursing research.

6.1 SUMMARY

The present study was undertaken to evaluate the effectiveness of Pranayama on stress among mothers of mentally retarded children at selected special school in Madurai.

THE STUDY CARRIED OUT THE FOLLOWING OBJECTIVES WERE,

2 To assess the level of stress among mothers of mentally retarded children at selected special school in Madurai"

3 To evaluate the effectiveness of pranayama on stress among mothers of mentally retarded children at selected special school in Madurai.

4 To associate the level of stress among mothers of mentally retarded children with their selected socio-demographic variables.

HYPOTHESES

The following hypotheses were set for the study, at, 0.05 level.

H1: There is a significant difference between the pre test and post test level of stress among the mothers of mentally retarded children at selected special school in Madurai.

H2: There is a significant association between the level of stress among mothers of mentally retarded children with their selected socio-demographic variables.

ASSUMPTIONS:

The study assumes that,

1. Mothers having mentally retarded children may experience varying level of stress.
2. Exposure to stress affects the wellbeing of an individual though the mothers havingnormal child.
3. Pranayama may not give any adverse reaction.

The conceptual model of this study was based on Ludwig Von Bertalanffy the general systems theory. The study was conducted by using one group pre test, Post test design in selected special school at Anbagam, pudur in Madurai. The populations of the study were mothers of mentally retarded children with mild and moderate level of stress. Purposive sampling technique was used to select the sample. The study consisted of 40 mothers of mentally retarded children in selected special school at Anbagam, pudur in Madurai, with mild and moderate level of stress. A pilot study was conducted on 10 of the non study subjects at Anbagam to find out the feasibility and practicability for conducting the study. After testing the validity and reliability, the tool was used for data collection. The participants of the pilot study were excluded from the main study. Data gathered were analyzed by using both descriptive and inferential statistics.

6.2 FINDINGS OF THE STUDY :

- When comparing the age group, the mothers of mentally retarded children, majority, 21[52.5 %] belonged to the age group of 31-40 years, 17[42.5%]

belonged to the age group of 20-30 years, 2[5.0%] belonged to the age group of 40-50 years.

- In the religion, most of the mothers of mentally retarded children, 37[92.5%] were hindu, 2[5.0%] were christian and 1[2.5%] were muslim.
- Regarding the educational status, 23[57.5%] have studied up to Higher secondary level, 10[25.0%] have studied up to primary level, 5[12.5%] have studied up to graduate and above, 2[5.0%] had no formal education.
- While discussing the occupational status, majority, 14[35.0%] were private employees, 12[30.0%] were Labour and 8 [20.0%] were self-employment and 6[15.0%] were government employee.
- When comparing the Income, 20[50.0%] were earning Rs 2001 – Rs 3000, 15[37.5%] were earning Rs 3001 - Rs 5000 and 5[12.5%] were earning >Rs 5000.
- Regarding the place of domicile, majority of the mothers of mentally retarded children, 23[57.5%] hailed from rural, 15[37.5%] hailed from urban and the remaining 2[5.0%] hailed from Sub urban.
- While discussing the type of marriage, majority of the mothers of mentally retarded children, 29[72.5%] were Non-consanguineous and the 11[27.5%] were belonged to consanguineous marriage.
- When comparing the type of family, 30[75.0%] belonged to joint family, and 10[25.0%] belonged to nuclear family.
- While discussing the type of delivery of the mothers of mentally retarded children, 18[45.0%] had normal vaginal delivery, 11[27.5%] had forceps delivery, 6[15.0%] had vacuum suction delivery and 5[12.5%] had LSCS delivery.

- Regarding the term of delivery at child birth of the mothers of mentally retarded children, 24[60.0%] had delivered full term, 12[30.0%] had delivered pre term and 4[10.0%] had delivered Intra Uterine Growth Retardation children.
- When comparing the number of children of the mothers of mentally retarded children, 28[70.0%] of mothers were having two children, 9[22.5%] of mothers were having only one child and 3[7.5%] were having three and above.
- When comparing the sex of the mentally retarded children, 29[72.5%] were male child and 11[27.5%] were female child.
- Regarding the duration of study in the mentally retarded school, 18[45.0%] were studying two years, 12[30.0%] were studying three years and 10[25.0%] were studying above three years.
- In the pretest majority of them 13[32.5%] having low stress, 17[67.5%] of them were having moderate stress. Where as in the posttest 28[70.0%]of the mothers of mentally retarded children were having low stress, 12[30.0%] of the mothers of mentally retarded children were having moderate stress.
- There was a highly significant difference in the mean scores between pretest and posttest in relation to mothers of mentally retarded children.
- On an average, in pre test, mothers of mentally retarded children were having 24.55 score and in posttest, mothers of mentally retarded children were having 15.98 score, difference is 8.57 score.The paired ‘t’ test value was 10.20, which was greater than the table value 3.55, which was statistically significant at 0.001 level.

- There was no significant association between post test level of stress and religion ($\chi 2 = 0.81$), occupation ($\chi 2 = 1.79$), total income of the family ($\chi 2 = 2.85$), place of domicile ($\chi 2 = 2.48$), type of marriage ($\chi 2 = 1.00$), type of delivery ($\chi 2 = 6.71$), term of delivery at child birth ($\chi 2 = 1.11$), number of children ($\chi 2 = 0.33$), sex of the child ($\chi 2 = 0.29$), duration of study in the school ($\chi 2 = 2.77$) among the mothers of mentally retarded children.
- There was a significant association between the post test level of stress and the other demographic variables such as age (41-50 years), education (higher education) and type of family (joint family).
- Pranayama therapy was effective in reducing the stress levels of the mothers of mentally retarded children at special school in Madurai.

6.3 IMPLICATIONS FOR NURSING:

The findings of the study have several implications on nursing practice, nursing administration, nursing education and nursing research.

NURSING PRACTICE

- This study finding will create awareness among the nurses about the importance of pranayama and its uses in reducing stress. This will help them to prevent various stress related illnesses.
- It helps the nurse to understand the effectiveness of teaching mothers of mentally retarded children about pranayama and the findings of the study clearly points out that reduction in stress will improve the quality of life among mothers of mentally retarded children in special school and in psychiatric ward.

- It will help the nursing personnel to be in the position to impart health education regarding pranayama to the people in the special school or in any community set up which strengthens the community psychiatry.

NURSING EDUCATION

- The concepts of pranayama is the key component in complementary and alternative therapy and though it is already included in the nursing curriculum of undergraduate and post graduate programme, but focus can be extended to practical training and exposure on pranayama can be incorporated in community psychiatry.
- Nursing students should be made well acquainted with pranayama and which can be used by themselves to free from stress.
- As a nurse educator, there are abundant opportunities for nursing professionals to educate the mothers as well as their family members regarding selected aspects of mental retardation, their familial concerns.
- Nurse educator needs to conduct health campaigns and use different informational modalities, teaching strategies in educating these communities, which promotes mothers of mentally retarded children.
- More emphasis should be given to conduct in-service education programme to decrease the level of stress among mothers of mentally retarded children to reduce further health problems due to increase stress, which may help to plan effective practice of relaxation measures like pranayama.

NURSING ADMINISTRATION

- Nurse administrators can prepare protocols and necessary policies to promote pranayama therapy in the psychiatric ward and to willingly participate in

outreach programmes in the community thus strengthening the community psychiatry also essential administrative support should be provided to conduct such activities.

- Nurse administrators must organize continuing nursing education program to the nurse's working in outreach areas and communities to enable them to keep abreast with current knowledge regarding pranayama therapy.
- Nurse administrators can mobilize the available resource personnel towards providing the health education to workers regarding various concerns of the mentally retarded children.

NURSING RESEARCH

- Extensive research must be conducted in this area to identify several effective methods of therapies.
- This study also brings about the fact that more studies need to be done at different settings, which are culturally acceptable, using various therapies.
- This study can be a baseline for future studies and this study can be inspired by other investigators to carry out further studies.

6.4 CONCLUSION

The study findings brought out the following conclusion:

- There was a significant difference between mean pre test and mean post test stress scores among mothers of mentally retarded children at $P<(0.001)$ level of significance.
- There was a significant association between the post test level of stress and the other demographic variables such as age, education and type of family.

- There was no significant association between post test level of stress and religion, occupation, total income of the family, place of domicile, type of marriage, type of delivery, term of delivery at child birth, number of children, sex of the child, duration of study in the school among the mothers of mentally retarded children.

The study concluded that mothers of mentally retarded children had stress. The daily intervention with pranayama for 20 minutes among mothers of mentally retarded children had shown statistically significant difference in pre test and post test level of stress. Thus pranayama was effective in terms of reducing the level of stress among mothers of mentally retarded children in selected special school. It indicated that pranayama can be used to all groups of mothers of mentally retarded children in terms of improving their happy life. So pranayama interventions are cost effective, non-invasive, non-pharmacological, free from side effects and highly feasible. The researcher concluded that it can be used as an effective intervention to improve the quality of life among mothers of mentally retarded children.

6.5 RECOMMENDATIONS FOR FURTHER RESEARCH:

Based on the findings of the study, the recommendations offered for future researchwere,

- A similar study can be replicated on a large sample to generalize the study findings.
- An experimental study can be under taken with a control group for effective comparison of the results.

- A comparative study can also be done to compare the effect of pranayama therapy with other therapies such as breathing exercise therapy, meditation therapy, yoga therapy etc.
- Similar study can be conducted on different settings like rehabilitation centres, residential institutions and psychiatric centres specially designed for the mentally challenged children.

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Appendices

APPENDIX – I

LETTER SEEKING AND GRANTING PERMISSION TO CONDUCT THE STUDY OF MENTALLY RETARDED CHILDREN AT SELECTED SPECIAL SCHOOL ANBAGAM, IN MADURAI

From

M.Saishree,
I year M.Sc (N),
College of Nursing,
Madurai Medical College,
Madurai-20.

To

The Secretory,
Mentally Retarded Home,
Anbagam,
K .Puthur,
Madurai-20.

Through the Proper channel,

Respected Sir/Madam,

Sub: Permission to conduct a dissertation study at Anbagam, Home - I year M.Sc.,(N) psychiatric nursing student -College of Nursing, Madurai Medical College,Madurai-requested-Regarding.

As per the Curriculum recommended by the Tamilnadu Dr. M. G. R. Medical University, i selected a topic "**A study to assess the effectiveness of pranayamaon stress among caregivers of caring different disabled children in a selected mentally retarded home at Madurai"** and i required to conduct a dissertation topic for the parttial fullfillment of the course.

I kindly request you to consider my topic and allow me to conduct the study in your esteemed department.

Thanking You

Madurai -20

23-12-2013

yours sincerely,

M. Sai

P. Vanitamani
23.12.13
for permission Mc

Mrs. P. COKILAMANI, M.Sc.(N),
Lecturer in Medical & Surgical Nursing
College of Nursing
Madurai Medical College, Madurai-625 020
Mobile No:- 98427 82044

permitted
Sr. selvy.

HEAD MISTRESS
ANBAGAM SPECIAL SCHOOL
RACE COURSE ROAD
MADURAI - 625 002.

APPENDIX – II

ETHICAL COMMITTEE APPROVAL LETTER

Ref. No. 68/E4/2/2014,

Govt. Rajaji Hospital,
Madurai.20. Dated:26.02.2014

Institutional Review Board / Independent Ethics Committee.
Capt. Dr.B. Santhakumar, M.D., (F.M.,) deanmdu@gmail.com
Dean, Madurai Medical College &
Govt Rajaji Hospital, Madurai 625020. **Convenor**

Sub: Establishment-Govt. Rajaji Hospital, Madurai-20-
Ethics committee-Meeting Minutes- for February 2014
Approved list - Regarding.

The Ethics Committee meeting of the Govt. Rajaji Hospital, Madurai was held on 07.02.2014, Friday at 10.00 am to 12.00.noon at the Anaesthesia Seminar Hall, Govt. Rajaji Hospital, Madurai. The following members of the committee have attended the meeting.

1.Dr.V. Nagarajan, M.D., D.M (Neuro) Ph: 0452-2629629 Cell.No 9843052029 nag9999@gmail.com	Professor of Neurology (Retired) D.No.72, Vakkil New Street, Simmakkal, Madurai -1	Chairman
2. Dr.Mohan Prasad , M.S M.Ch Cell.No.9843050822 (Oncology) drbkcmp@gmail.com	Professor & H.O.D of Surgical Oncology(Retired) D.No.32, West Avani Moola Street, Madurai -1	Member Secretary
3. Dr. Parameswari M.D (Pharmacology) Cell.No.9994026056 drparameswari@yahoo.com	Director of Pharmacology Madurai Medical College	Member
4. Dr.S. Vadivel Murugan, MD., (Gen.Medicine) Cell.No 9566543048 svadivelmurugan_2007@rediffmail.com	Professor& H.O.D of Medicine Madurai Medical College	Member
5. Dr.S. Meenakshi Sundaram, MS (Gen.Surgery) Cell.No 9842138031 drsundarms@gmail.com	Professor & H.O.D of Surgery Madurai Medical College	Member
6. Mrs. Mercy Immaculate Rubalatha, M.A., Med., Cell. No. 9367792650 lathadevadoss86@gmail.com	50/5, Corporation Officer's quarters, Gandhi Museum Road, Thamukam, Madurai-20	Member
7. Thiru..Pala. .Ramasamy , BA.,B.L., Cell.No 9842165127 palaramasamy2011@gmail.com	Advocate, D.No.72.Palam Station Road, Sellur, Madurai -2	Member
8. Thiru. P.K.M. Chelliah ,B.A Cell.No 9894349599 pkmandco@gmail.com	Businessman, 21 Jawahar Street, Gandhi Nagar, Madurai-20	Member

The following Projects was approved by the committee.

Name of P.G.	Course	Name of the Project	Remarks
M. Saishree	M.Sc., (Nursing) College of Nursing, Madurai Medical College, Madurai.	A study to assess the effectiveness of Pranayama on stress among mothers of mentally retarded children at selected special school in Madurai.	Approved

Please note that the investigator should adhere the following: She/He should get a detailed informed consent from the patients/participants and maintain it Confidentially.

1. She/He should carry out the work without detrimental to regular activities as well as without extra expenditure to the institution or to Government.

2. She/He should inform the institution Ethical Committee, in case of any change of study procedure, site and investigation or guide.

3. She/He should not deviate the area of the work for which applied for Ethical clearance.

She/He should inform the IEC immediately, in case of any adverse events or Serious adverse reactions.

4. She/He should abide to the rules and regulations of the institution.

5. She/He should complete the work within the specific period and if any

Extension of time is required He/She should apply for permission again and do the work.

6. She/He should submit the summary of the work to the Ethical Committee on Completion of the work.

7. She/He should not claim any funds from the institution while doing the work or on completion.

8. She/He should understand that the members of IEC have the right to monitor the work with prior intimation.

Member Secretary **Chairman**
Ethical Committee

26.2.14 **DEAN/Convenor**
Govt. Rajaji Hospital,
Madurai- 20.

26/2/14

To
The above Applicant
-thro. Head of the Department concerned

APPENDIX – III

CONTENT VALIDITY CERTIFICATES

CERTIFICATE OF VALIDATION

This is to certify that the tool

SECTION A – Demographic Data

SECTION B – Perceived Stress Scale

Prepared for data collection by, Mrs.M. Saishree,II year M.Sc (N) student, College of Nursing, Madurai Medical College, Madurai. Who has undertaken the study field on thesis entitled **"A study to assess the effectiveness of Pranayama on stress among mothers of mentally retarded children at selected special schools in Madurai."** has been validated by me.

SIGNATURE OF THE EXPERT

NAME:

Dr. T. KUMANAN, M.D.(PSY),DPM
Reg. No.42857
Professor of Psychiatry / Senior Civil Surgeon
Madurai Medical College / Govt. Rajaji Hospital
Madurai

DESIGNATION:

DATE: 18.7.2014

CERTIFICATE OF VALIDATION

This is to certify that the tool

SECTION A – Demographic Data

SECTION B – Perceived Stress Scale

Prepared for data collection by, Mrs.M. Saishree,II year M.Sc (N) student, College of Nursing, Madurai Medical College, Madurai. Who has undertaken the study field on thesis entitled **"A study to assess the effectiveness of Pranayama on stress among mothers of mentally retarded children at selected special schools in Madurai."** has been validated by me.

N. Suresh 15/7/14

SIGNATURE OF THE EXPERT

NAME: N. SURESH KUMAR

DESIGNATION: Asst. Prof. Cum Clinical Psychologist

DATE: 15/7/14

N. SURESH KUMAR, M.A., M.Phil.
Asst. Prof. Cum Clinical Psychologist
Dept. of Psychiatry
Madurai Medical College
Madurai-20.

CERTIFICATE OF VALIDATION

This is to certify that the tool

SECTION A – Demographic Data

SECTION B – Perceived Stress Scale

Prepared for data collection by, Mrs.M. Saishree,II year M.Sc (N) student, College of Nursing, Madurai Medical College, Madurai. Who has undertaken the study field on thesis entitled **"A study to assess the effectiveness of Pranayama on stress among mothers of mentally retarded children at selected special schools in Madurai."** has been validated by me.

SIGNATURE OF THE EXPERT

NAME: V. Jesinda Vedanayagi

DESIGNATION: Asso. Professor

DATE: 1/8/14

CERTIFICATE OF VALIDATION

This is to certify that the tool

SECTION A – Demographic Data

SECTION B – Perceived Stress Scale

Prepared for data collection by, Mrs.M. Saishree,II year M.Sc (N) student, College of Nursing, Madurai Medical College, Madurai. Who has undertaken the study field on thesis entitled **"A study to assess the effectiveness of Pranayama on stress among mothers of mentally retarded children at selected special schools in Madurai."** has been validated by me.

R. Jancy

SIGNATURE OF THE EXPERT

NAME: R. Jancy Rachel Daisy

DESIGNATION: Associate professor
C.S.I. Jeyaraj Annapackiam
College of Nursing.
Pasumalai,
Madurai
25.7.14

DATE:

CERTIFICATE OF VALIDATION

This is to certify that the tool

SECTION A – Demographic Data

SECTION B – Perceived Stress Scale

Prepared for data collection by, Mrs.M.Saishree,II year M.Sc (N) student, College of Nursing, Madurai Medical College, Madurai. Who has undertaken the study field on thesis entitled **"A study to assess the effectiveness of Pranayama on stress among mothers of mentally retarded children at selected special schools in Madurai."** has been validated by me.

G. Gomathy

SIGNATURE OF THE EXPERT

NAME G. Gomathy

DESIGNATION : Assist Prof

DATE : 30/7/14

APPENDIX- IV

INFORMED CONSENT FORM

ஒப்புதல் அறிக்கை

பெயர்: **நாள்:**

எனக்கு இந்த செவிலிய ஆய்வினைப் பற்றிய முழு விவரம் விளக்கமாக எடுத்துரைக்கப்பட்டது. இந்த ஆய்வில் பங்கு கொள்வதில் உள்ள நன்மைகள் மற்றும் தீமைகள் பற்றி முழுமையாக புரிந்துகொண்டேன். இந்த ஆய்வில் தானாக முன் வந்து பங்கு பெறுகிறேன். மேலும் எனக்கு இந்த ஆய்வீலிருந்து எந்த சமயத்திலும் விலகிக கொள்ள முழு அனுமதி வழங்கப்பட்டுள்ளது. என்னுடைய பெயர் மற்றும் அடையாளங்கள் ரகசியமாக வைத்துக கொள்ளப்படும் என்றும் எனக்கு உறுதியளிக்கப்பட்டுள்ளது.

கையொப்பம்

APPENDIX – V

RESEARCH TOOL-ENGLISH

SECTION A

SOCIO DEMOGRAPHIC VARIABLES

1. AGE
    a) 20yrs to 30 yrs
    b) 31 yrs to 40 yrs
    c) 41 yrs to 50 yrs ☐

2. RELIGION
    a) Hindu
    b) Christian
    c) Muslim ☐
    d) Others

3. EDUCATION
    a) No formal education
    b) Primary education ☐
    c) Higher secondary
    d) Graduate and above

4. OCCUPATION
    a) Private employee
    b) Government employee ☐
    c) Labour
    d) Self employment

5. TOTAL INCOME OF FAMILY
    a) Rs 2001 – Rs3000 P / M
    b) Rs 3001 – Rs 5001 P / M ☐
    c) Above Rs 5000 P / M

6. PLACE OF DOMICILE

a) Urban ☐

b) Rural

c) Sub urban

7. TYPE OF MARRIAGE

a) Consanguineous marriage ☐

b) Non- Consanguineous marriage

8. TYPE OF FAMILY

a) Nuclear family ☐

b) Joint family

c) Extended family

9. TYPE OF DELIVERY:

a) Normal vaginal delivery ☐

b) Forceps delivery

c) Vacuum suction delivery

d) LSCS

10. TERM OF DELIVERY AT CHILD BIRTH:

a) IUGR ☐

b) Pre term

c) Full term

11. NUMBER OF CHILDREN

a) One child ☐

b) Two children

c) Three and above

12. SEX OF THE CHILD:

a) Male child ☐

b) Female child

13. DURATION OF STUDY IN SPECIAL SCHOOL:

a) Two years

b) Three years

c) Four years ☐

d) Above four years

SECTION B

PERCEIVED STRESS SCALE

The questions in this scale ask you about your feelings and thoughts **during the last month**. In each case, you will be asked to indicate by circling *how often* you felt or thought a certain way.

Name_____ Date _____

Age_____ Gender (Circle): **M** **F** Others _____

0 = Never 1 = Almost Never 2 = Sometimes 3 = Fairly Often 4 = Very Often

S/N	Questions	Never	Almost Never	Some Times	Fairly Often	Often
1	In the last month, how often have you been upset because of something that happened unexpectedly?	0	1	2	3	4
2	In the last month, how often have you felt that you were unable to control the important things in your life?	0	1	2	3	4
3	In the last month, how often have you felt nervous and stressed?	0	1	2	3	4
4	In the last month,how often have you dealt successfully with day – to – day problems and annoyances?	4	3	2	1	0
5	In the last month, how often have you felt that you were effectively coping with important change that were occurring in your life?	4	3	2	1	0

6	In the last month, how often have you felt confident about your ability to handle your personal problems?	4	3	2	1	0
7	In the last month, how often have you felt that things were going your way?	4	3	2	1	0
8	In the last month, how often have you found that you could not hope with all the things that you had to do?	0	1	2	3	4
9	In the last month, how often have you been able to control irritations in your life?	4	3	2	1	0
10	In the last month, how often have you felt that you were on top of things?	0	1	2	3	4
11	In the last month, how often have you been angered because of things that happened that were outside of your control?	0	1	2	3	4
12	In the last month, how often have you found yourself thinking about things that you have to accomplish?	0	1	2	3	4
13	In the last month, how often have you been able to control the way you spend your time?	4	3	2	1	0
14	In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	0	1	2	3	4

APPENDIX – VI
REARCH TOOL-TAMIL
SECTION A
SOCIO DEMOGRAPHIC VARRIABLES

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1) ÅÂÐ

«) 20 - 30 Å¨Ã
¬) 31 - 40 Å¨Ã
þ) 41 - 50 Å¨Ã

2) Á¾õ

«) þóÐ
¬) ¸È¦Š¾Å÷
þ) Ó Š Ä¦õ
®) À¦ÈÁ¾õ

3) ¸øÅ¦¾Ì¾

«) ÀÊì¸¡¾Å÷
¬) ¬ÃõÀì¸øÅ¦
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þ) å 5000 ì Ì §Áø

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SECTION B

உணர்ந்து அனுபவித்த

À¡¦× ¬

அழுத்த அளவுகோல் (Perceived Stress Scale)

இந்த அளவு கோலில் உள்ள வினாக்கள் கடந்த மாதத்திய உங்களது உணர்வுகளையும் எண்ணங்களையும் பற்றி உங்களிடம் கேட்கப்படும் கேள்விகளாகும். எந்த அளவுக்கு ஒரு குறிப்பிட்ட உணர்வு அல்லது எண்ணம் கொள்கிறீர்கள் என்பதை ஒவ்வொரு வினா - விடையில் வட்டமிட்டுக் குறிப்பிட வேண்டும்.

பெயர் .....

தேதி .....

வயது ..... பால் : ஆண் / பெண் .....

ஒரு போதும் இல்லை	0	சில சமயங்களில	2
பெரும்பாலும் இல்லை	1	மிதமாக அடிக்கடி	3
அடிக்கடி	4		

வ. எண்.	பொருளடக்கம்	ஒருபோதும் இல்லை	பெரும்பாலும் இல்லை	சில சமயங்களில்	மிதமாக அடிக்கடி	அடிக் கடி
1	கடந்த மாதத்தில் எதிர் பாராதது நிகழ்ந்தமையால் எத்தனை முறை மன அமைதி இழந்திருக்கிறீர்கள்.	0	1	2	3	4
2	கடந்த மாதத்தில் உங்களது வாழ்வில் எத்தனை முறை முக்கியமானவைகளைக் கட்டுப் பாட்டுக்குள் கொண்டு வர இயலவில்லை என்ற உணர்வுடன் இருந்தீர்கள்?	0	1	2	3	4
3	கடந்த மாதத்தில் எத்தனை முறை நரம்பு தளர்ச்சியுடனும் அழுத்த உணர்வுடனும் இருந்தீர்கள்?	0	1	2	3	4
4	கடந்தமாதத்தில் எத்தனைமுறைஅன்றாடபிரச்சினைகளையும் சங்கடங்களையும் வெற்றிகரமாககையாண்டு இருக்கிறீர்கள்?	4	3	2	1	0
5	கடந்த மாதத்தில் எத்தனை முறை உங்கள் வாழ்வில் ஏற்பட்டுக் கொண்டிருந்த பெரும் மாற்றத்தை திறம் பட கையாளும் உணர்வு இருந்தது?	4	3	2	1	0
6	உங்களது சொந்த (தனி) பிரச்சினைகளைக் கையாளுவதற்கான திறம் பற்றிய தன்னம்பிக்கை உணர்வு இருந்ததா?	4	3	2	1	0
7	கடந்த மாதத்தில் எத்தனை முறை நீங்கள் நினைத்தவாறு செயல்கள் நடந்து கொண்டிருந்தன என்ற உணர்வுடன் இருந்தீர்கள்?	4	3	2	1	0
8	கடந்த மாதத்தில எத்தனை முறை செய்ய வேண்டிய செயல்களை, செய்ய இயலாத நம்பிக்கை இருந்ததை பார்த்தீர்கள்?	0	1	2	3	4
9	கடந்தமாதத்தில் உங்களதுவாழ்வில் எரிச்சல்களைஎத்தனைமுறைகட்டுப்பாட்டுக்குள் கொண்டுவரமுடிந்தது?	4	3	2	1	0
10	கடந்த மாதத்தில் எந்த அளவுக்கு உயர் நிலையில் இருந்ததாக உணர்ந்தீர்கள்?	4	3	2	1	0
11	கடந்த மாதத்தில், நடந்த செயல்கள் உங்களை மீறிச் சென்று விட்டதாக எண்ணி எத்தனை முறை கோப உணர்வு கொண்டு இருந்தீர்கள்?	0	1	2	3	4
12	கடந்தமாதத்தில்,எத்தனைமுறைநினைத்தவைகள் நடந்துவிட்டதாகபார்த்துஉள்ளீர்கள்?	0	1	2	3	4
13	கடந்த மாதத்தில் எத்தனை முறை உங்கள் நேரத்தை கட்டுப் பாட்டுக்குள் கொண்டு வந்தீர்கள்?	4	3	2	1	0
14	கடந்த மாதத்தில் எத்தனை முறை உங்களால் தாங்கிக் கொள்ள முடியாத அளவு பிரச்சினைகள் கூடுவது போல் உணர்ந்தீர்கள்?	0	1	2	3	4

APPENDIX - VII

CERTIFICATE OF ENGLISH EDITING

TO WHOM SO EVER IT MAY CONCERN

This is to certify that the dissertation **"A study to assess the effectiveness of pranayama on stress among mothers of mentally retarded children at selected special school in Madurai"**done by Mrs,M.Saishree, II year, M.Sc, Nursing student, College of Nursing, Madurai Medical College, Madurai - 20 has been edited for English language appropriateness.

T. Venkatesh 26.07.14

Name: T. VENKATESH Signature

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APPENDIX - VIII

CERTIFICATE OF TAMIL EDITING

TO WHOM SO EVER IT MAY CONCERN

This is to certify that the dissertation **"A study to assess the effectiveness of pranayama on stress among mothers of mentally retarded children at selected special school in Madurai"** done by Mrs.M.Saishree, II year, M.Sc Nursing student, College of Nursing, Madurai Medical College, Madurai - 20 has been edited for Tamil language appropriateness.

Name: திமt M. SARATHA.

Signature 28.7.14

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APPENDIX - IX

INTERVENTION

Introduction

The origins of pranayama have been traced as far back as the ancient rishis, 800 years ago. Pranayama have been used to restore and maintain health and to elevate self awareness and consciousness. 'Prana' translates as life force or 'energy'. The ancient science of breath is called pranayama meaning both 'control of energy' and 'expansion of energy'. These breathing techniques have the potential to relieve anxiety and related medical illnesses. Through this information can know about the pranayama to reduce anxiety.

Definition :

Pranayama breathing is often performed in yoga and meditation. It means the practice of voluntary breath control and refers to inhalation, retension and exhalation that can be performed quickly or slowly.

- Jerathet. al. (2006)

Purposes :

- It reduces anxiety
- It keeps steady mind and body
- It reduces depression
- It maintains good health
- It promotes quality of life
- It provides oxygen to the cells

Indications :

- Anxiety disorders
- Depressive disorders
- Hypertension and heart diseases
- Insomnia
- Tension headache
- Smoking and substances abuse
- Obesity
- Spleen disorders

Contra-indications:

- Nasal blocks.
- Major medical illness.
- Clients with filled stomach.
- Severe asthma.

Frequency

Once a day, in the morning .

Duration

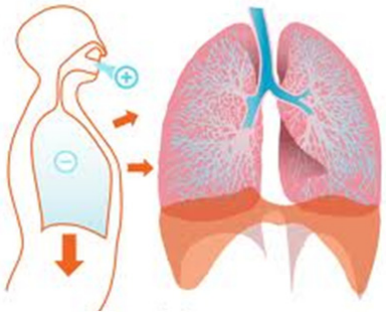
20 minutes duration.

Position

Sugasana.

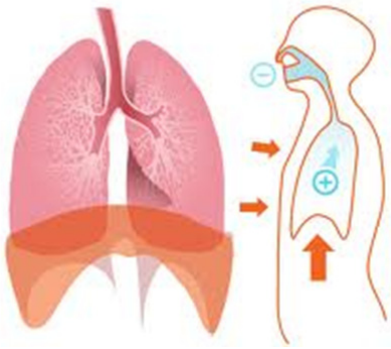
Procedure

- Explain the procedure and its benefits to the client.
- Demonstrate and ask the client to sit in Sugasana. The back should be straight.
- Explain the clients to keep concentration on the chest while during follow 4 steps.
    - Step 1 : Inspiration, and inspiration. Which focuses on controlling the intake of air keeping it smooth and efficient with the time duration of 4 seconds, Inhale through the both nostrils.
    - Step 2 : Breath holding. Which focuses on controlling the retention of air within the lungs after an inhalation with the time duration of 4 seconds



INSPIRATION, END INSPIRATION

- Step 3 : Expiration, end expiration, Which focuses on controlling the expelling of used air and waste from the lungs with the time duration of 6 seconds.
- Step 4 : Breath holding, Which focuses on controlling the retention of empty lungs after an exhalation with the time duration of 2 seconds.



EXPIRATION, END EXPIRATION

- The time ratio of each step is respectively, 4:4:6:2 seconds with 20 seconds rest for each cycle. Likewise, 20 cycles should be done.

- After 20 cycles close your Pranayama with a deep breathing and slowly release it.
- Explain the client slowly to normal position.

APPENDIX – X

TRAINING CERTIFICATE

THE VALLIAMMAL INSTITUTION (TVI)

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✆ 98942 49630; 98430 40226 email: ananthibetsy@rediffmail.com

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APPENDIX-XI

PHOTOGRAPHS

i. Researcher Collects Data from Subjects

ii. Researcher gives pranayama to the Subjects